

Child Psychiatric Disorders and Family Dysfunction in Migrant Workers' and Military Families*

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Summary. Migrant adaptation was studied in children and families of French soldiers and of Greek and Turkish migrant workers in West Berlin. In addition, a German control group was investigated. All four samples were matched with regard to sex and age of the children. Psychiatric morbidity differed significantly between the migrant groups. Disturbed parental behaviour and impaired maternal health clearly correlated with psychiatric disturbance in the children in samples. Cultural rather than socio-economic factors seemed to be most influential with regard to psychosocial adaptation.

Key words: Migrants – Military families – Children – Psychiatric disorders

Introduction

Traditionally, economic restrictions, poverty, political crises, and persecution due to religious and political beliefs have been the main reasons for migration. These were the principal factors motivating the large waves of immigration into North America and Australia up to the Second World War. While some of these factors are still relevant at present, further factors have since emerged that influence the shape of migration which has confronted central Europe since that war. Migrant worker populations, mainly from the Mediterranean countries, have been coming to central Europe essentially in search of employment and are, hence, directed towards more short-term goals rather than those of complete social transplantation which traditionally characterize migration.

It took several decades to realize that this new type of migration also entailed a number of risks and problems for cultural and psychosocial adaptation. Simply setting in a host country rather than actively seeking social integration may itself contribute to

some of the typical problems of minorities or migrant populations, i.e. cultural conflict, ethnocentrism, ghetto formation, segregation, and uprootedness. Some of these problems may become even more pronounced with this new type of migration.

Gradually migrant workers have been able or allowed to have their families join them. This has included their children who were raised either in the host country, in the parents' country of origin or in both. The stress and burdens imposed on these families became increasingly evident and have since been reviewed in several monographs (Ekstrand 1977; Kantor 1965; Nann 1982; Rocha Trindade 1983). Child psychiatric aspects of this process have been studied only in a small series of mainly clinical and rarely epidemiological investigations in Europe, e.g. in Great Britain (cf. the review of Quinton 1980; Rutter et al. 1974; 1975). Sweden (Aurelius 1980, 1979) and the Federal Republic of Germany (Steinhausen 1982; Poustka 1984).

While the vast majority of the migrant workers of Mediterranean origin are unskilled or semiskilled labourers, there exists another much smaller group of highly skilled employees and representatives who repeatedly move around the globe. This group includes representatives of big international business companies as well as national governmental and international agencies. In the latter case global obligations have forced an increasing number of families to follow the main bread-winner around the world. A subgroup of these migrants are diplomats and members of the armed forces. Historically, this phenomenon is not entirely new. However, modern transportation and communication systems have facilitated frequent moves from country to country and have perhaps increased the stress of adaptation for this group of families. Again there have only been a limited number of studies analysing this process from a child psychiatric or psychological point of view. Up to now the problems of migration in military families have been described by Jensen et al. (1986) and Goldman

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(1976), while Werkman (1979) has reviewed the problems in the families of diplomats.

West Berlin, where foreigners make up almost 10% of the total population, is one of the places where both variants of current work-related migration can be studied simultaneously. Besides an extended number of ethnic groups, mainly of Mediterranean origin, the city, for historical reasons, has three extended alien military communities, namely U.S. American, British and French soldiers and their families. While all these migrant groups tend to be segregated in specific quarters and boroughs of the city, the living conditions are quite different. In general, military families are quite privileged with regard to housing, income, and community services, while the Mediterranean groups of migrant workers to a greater extent suffer from poor housing, low-income employment (e.g. factory work) and poor social services. On the other hand, the former group endures more moves and shorter stays, while the latter usually tends to settle and not to return to the home country. Furthermore, social status in general is higher among military families owing to the fact that almost only officers and sergeants have their families with them abroad, while the lower-ranking soldiers are either very young and single or are simply not accompanied by their families.

The authors of the present study were mainly interested in the psychosocial adaptation of children and their families under these different circumstances of migration. A series of epidemiological studies should also allow for comparisons of psychosocial stresses and risks in four populations, namely French children and families living in a military community, Turkish and Greek children and families representing Mediterranean migrant workers and a German control group.

Methods

Samples. The studies reported here began with the examination of complete age groups of Greek children in West Berlin. On an epidemiological basis, all 8- to 11-year-old Greek children were submitted to screening procedures between 1979 and 1981, whereby psychiatric abnormalities were recorded on questionnaires completed by parents and teachers. Based on administrative registration by the local authorities and school records, a total sample of 263 subjects was identified and 238 children were examined as part of the screening with 25 (9.5%) refusals. A random sample of 105 German children was taken and examined in the same way. This sample was drawn from three local school populations in two boroughs having a high proportion of migrants. In 1983 the total population of 8- to 11-year-old French children living in West Berlin (268) were submitted to the same screening procedures. However, owing to the specific conditions of the military community only 135 (50.4%) were willing (or permitted) to participate.

Because of limited research capacities, not all participants of this screening phase were submitted to intensive assessment. Thus, sample sizes for the main study had to be reduced. In order to obtain representative subsamples the following procedure was employed. According to the results of the questionnaires completed by parents and teachers, the samples were divided into quartiles. Then, based on a computer program, 70 Greek, 50 German, and 50 French children and their families were randomly selected as representative of their respective groups. In the main study these samples were submitted to more detailed, individual investigation. In order to represent the differing sample sizes of the original groups and also to achieve a closer match of the Mediterranean samples, it was decided to maintain the slightly differing sample sizes of 70 and 50, respectively. The German sample included in these analyses was representative of the current social class distribution of the West Berlin population, as revealed by the last census in 1970 (Office of Statistics of the City of West Berlin 1976).

The complementary sample of 70 Turkish children was randomly taken in 1982 in one district of West Berlin that is densely populated by Turks. Limited research capacities and the extreme size of the population, amounting to several thousand Turkish children living in the city, did not allow for any screening. All children of the participating families attended the same primary school. Of the 98 families asked to participate, 28 refused.

The characteristics of the four samples are presented in Table 1 and clearly show that the age and sex match was successful.

Procedure. During the screening phase the Greek, the German, and the French samples were examined with regard to behaviour abnormalities. Because it was felt that the Mediterranean subjects might not be very accustomed to paper-and-pencil measures, interviews were chosen rather than behaviour questionnaires. Based on systematic analyses of the relevant literature on existing checklists and child behaviour questionnaires at the time of planning this study, 64 items were included in the parental interviews. Each item was rated on a three-point scale (0 = none, 1 = slight, 2 = marked). When analysing the data of the Greek and German samples, it was found that 42 items had frequencies of at least 5%. These items were included in the psychiatric interview performed in the main study with the reduced samples.

All the findings documented here are based on highly structured interviews with the parents of the children examined. The chief areas explored were: the social and economic situation of the family, the development of the child, psychopathology of the child, characteristics of the child's upbringing and of family functioning. The parts of the interview dealing with upbringing and family functioning represent an adapta-

Table 1. Sample characteristics

	French (F) (n = 50)	German (D) (n = 50)	Greek (G) (n = 70)	Turkish (T) (n = 70)
Age (in months)				
Mean	128.3	126.9	128.1	123.3
Standard deviation	8.2	11.9	12.8	15.9
Sex distribution (%)				
Male	52.0	52.0	47.1	51.4
Female	48.0	48.0	52.9	48.6

tion of the interviews developed by Richman and Graham (unpublished work). The remaining parts of the interview were developed by the first author.

The psychopathology of the child was ascertained by inquiring about the above-mentioned 42 symptoms. Based on these assessments, the senior author rated each parental interview protocol on a four-point scale with regard to severity of psychiatric disturbance of the child (0 = none, 1 = dubious, 2 = slight, 3 = marked). Based on the same material, a diagnosis in accordance with ICD-9 was given by the senior author. In the assessment of child upbringing and family functioning, the relevant variables were linked together as a series of indices. These indices were created by adding up the content-related items dealing with disturbed parental behaviour towards the child (e.g. parental irritability, inadequate child rearing), disturbed marital relationship (e.g. lack of confidence, dissatisfaction with each other), impaired health including emotional disturbances of the mother and father (e.g. states of anxiety, depressive symptoms), and further family-related problems (e.g. health problems of siblings, police or court contact).

All assessments were conducted by trained interviewers in the native language of the subjects. In the case of the screening studies of Greek and German lower-class children it was possible to check the level of agreement between interviewers and expert raters. Here a total of 85 interviews were performed and evaluated by two interviewers simultaneously. On the item level a mean reliability coefficient of 94.9% (range 86.9%–100%) was obtained. Mean inter-rater reliability comprising 17 trained interviewers and four experienced clinicians amounted to 95.2% (range 89.6%–97.9%). The coefficients can be viewed as very satisfactory.

Results

The frequency of disorders and the child psychiatric diagnoses are given in Table 2. If the four groups are compared in terms of prevalence, the two samples of migrant workers' children represent extremes. With 15.7% the Greek children had the lowest rate of prevalence and the Turks, with 34.3%, the highest. Only

the prevalence rates of these two samples differed significantly from one another (chi-square = 6.44, $df = 1$; $P = 0.01$). The French and the German sample were in between with 28% and 24%, respectively. With regard to sex differences, there was only a trend in the French sample ($P = 0.09$) for boys to be affected more often than girls.

Differentiation of the individual diagnoses shows that emotional disturbances predominated in all samples. French children displayed a high rate of the hyperkinetic syndrome. Among the Turkish children, the frequency of enuresis was remarkable, as it appeared almost as frequently as emotional disorders and was often connected with other psychiatric diagnoses. Except for the Turkish sample, one can also observe a mild degree of conduct disorders in all other groups. Other diagnoses were seldom recorded.

Comparison of the indices of upbringing and family functioning is shown in Fig. 1 and Table 3. As far as the indices of family functioning are concerned, it is possible on the basis of the comparisons made to establish a consistent pattern. The French and the Turkish families present in general the highest level of disorder and the Greek the lowest, while the German sample occupies a position in the middle. Accordingly, French and Turkish families were most commonly affected by disorders of parental behaviour, and of the father's and mother's health, as well as other familial problems. This was even less often the case for Greek than for German families. Only marital relationship showed a different pattern: here German parents had the second highest frequency of disturbances and French parents ranked third.

In looking for explanations of the children's psychiatric disorders, we investigated the significance of family functioning. Given the assessment of severity

Table 2. Frequency of child psychiatric disturbances

	French (F)		German (D)		Greek (G)		Turkish (T)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Number of disturbed children	14	28	12	24	11	15.7	24	34.3
Male	10	20	7	14	4	5.7	12	17.1
Female	4	8	5	10	7	10	12	17.1
Children with two diagnoses	3	6	2	4	—	—	7	10.0
ICD diagnoses								
300 Neuroses	—	—	—	—	1	1.4	1	1.4
307.6 Enuresis	1	2	1	2	4	5.6	11	15.7
307.7 Encopresis	—	—	1	2	—	—	—	—
309 Adjustment reaction	—	—	—	—	—	—	1	1.4
312 Disturbance of conduct	—	—	2	4	2	2.8	4	5.7
313 Disturbance of emotions	9	18	9	18	4	5.6	13	18.5
314 Hyperkinetic syndrome	7	14	1	2	—	—	1	1.4

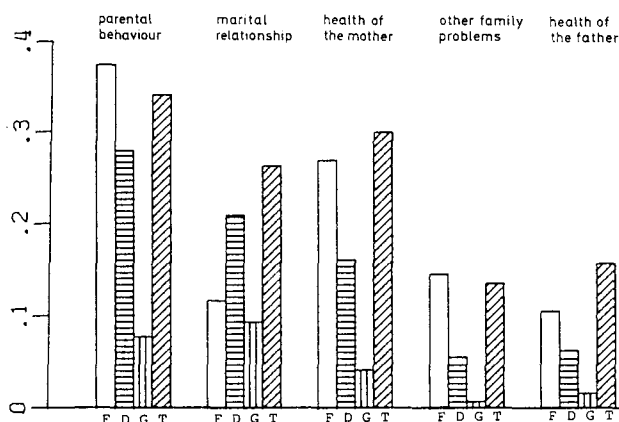


Fig. 1. Disturbed family functions. Comparison of family function scores among the four samples. F, French; D, German; G, Greek; T, Turkish

Table 3. Findings of analyses of variance for the main effects of sample and severity of child psychiatric disorder on family function scores

	Sample		Severity	
	F	P	F	P
Parental behaviour	17.01	0.001	38.20	0.001
Marital relationship	13.45	0.001	0.24	NS
Health of the mother	29.35	0.001	5.35	0.02
Other family problems	12.68	0.001	3.90	0.05
Health of the father	20.88	0.001	0.98	NS

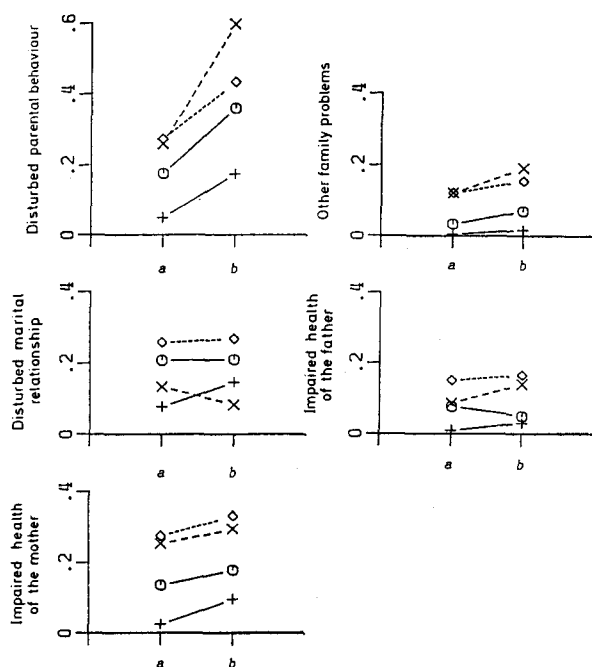


Fig. 2. Psychiatric disorders of the child in relationship to disturbed family functions in the four samples. a, No psychiatric abnormality in the child; b, psychiatric disorder in the child; X---X French; ◇---◇ Turkish; ○---○ German; +---+ Greek

of psychiatric disorders in the children examined, it was possible to divide each sample into two groups. Children receiving a score of 0 or 1 with regard to severity were rated as having no psychiatric abnormality, while a score of 2 or 3 was an indicator of psychiatric status. The association of the psychiatric status of the child – being the dependent variable – with sample and family indices was analysed by two-way analyses of variance. The findings are shown in Table 3 and illustrated graphically in Fig. 2.

In addition to the differences found between the samples with regard to the frequency of psychiatric disturbance, it also became clear that for a number of indices there is a significant connection with the severity of the child's psychiatric disorder, whereas there were no interaction effects. Disturbed parental behaviour in all samples thus correlates with severity of psychiatric abnormality in the child. Analogous connections also exist for a disorder of health in the mother.

Similarly, one further corresponding connection arises between other family problems, on the one hand, and child psychiatric abnormalities, on the other. In some samples there are significant connections between health disorder in the father or disturbed marital relationship and psychopathological abnormalities of the children.

Discussion

The presentation of the above findings is an attempt to summarize epidemiological investigations carried out between 1979 and 1984 with migrant worker families. Before discussing the main findings, it is necessary to comment on certain limitations of this study.

First, a legitimate question may arise concerning the representativeness of the samples. While the refusal rate in the Greek sample was low – even lower than in a similar study on Italian and Turkish migrant children in Germany (Poustka 1984) – there was a high refusal rate among the French participants. The security conditions in the French military community and the lack of census data on this population made it impossible for us to analyse whether or not the high refusal rate in fact violated the representativeness. Given the lack of any epidemiological study of this specific population, we decided to include this sample as a pilot study and to use the data obtained for comparative purposes.

Unfortunately, we were unable to overcome the problem of the relatively high rate of refusal among the Turkish families. Since there was no special incentive offered to the parents and considering that

this population showed the greatest difficulties in adaptation, it became necessary to accept finally this rather high proportion of refusals.

Finally, the German control group was randomly selected. Here we were able to assure representativeness with regard to social class distribution as documented by the official census data.

Concerning methodology, we decided to use direct interviews in the native language rather than questionnaires. Although this approach is less economical, when used with migrant populations it has certain advantages over paper-and-pencil procedures. Such populations often come from countries in which the general level of formal education is quite rudimentary and the exposure to such inventories quite rare. In addition to this, the list of symptoms covered by our psychiatric interviews was more exhaustive and therefore clinically more discriminating than the brief behaviour questionnaires, such as the Rutter scales, which were employed, for example, for screening purposes in epidemiological studies on the Isle of Wight (Rutter et al. 1970).

As we have shown elsewhere, *a priori* grouping of these symptoms into scales resulted in sufficient consistency, which is a further indication of the clinical feasibility of this method (Steinhausen et al. 1983). Finally, the training of bilingual interviewers added considerably to the reliability of our findings.

The main question of these extended studies concerning the psychiatric morbidity of migrant children as compared with indigenous German children revealed distinct differences between the groups. The two samples of migrant children from Turkey and Greece formed the extremes between which the French and the German samples lie. The particularly high prevalence among the Turks could be accounted for in considerable measure though by no means exclusively, by a marked excess of children with enuresis – something that is well recognized in clinical practice. Leaving cases of monosymptomatic enuresis aside, one arrives at a prevalence rate of 28.6% in the Turkish sample, which is quite comparable with the French sample. Analysis of the high prevalence of enuresis among Turkish children revealed an unusually high rate of enuresis among siblings, parents and other relatives. The resulting question as to why Turkish migrants generally show such a high rate of enuresis in the family as a whole, however, could not be answered by the present investigation.

A remarkably high number of hyperactive children – exclusively boys – was observed among the French migrant children. In an attempt to understand this unexpected frequency we analysed some correlating factors and found that hyperactivity was linked with more than one change of school and resi-

dence. Certainly, further unknown factors must have been operating since the aetiology of hyperactivity is multifactorial. However, frequent moves might have added to a given vulnerability in these children.

Among all four samples emotional disorders were most prevalent, thus providing clear parallels with international epidemiological studies. In this connection, it is remarkable that the 16% prevalence rate of psychiatric disorders among the Greek children corresponds to expectations based on the literature (cf. Wunsch-Hitzig et al. 1980), which, however, was mainly recorded using samples from the country and provinces. At first sight, the rate of prevalence of 28% among French children and even more the prevalence rate of 24% among the German census sample appears to be excessive. However, it agrees well with the result from inner London reported by Rutter et al. (1975). Therefore, this study also adds to the epidemiological finding that big cities obviously do contribute to child psychiatric disorders.

Besides child psychiatric disorder family functions were also studied in the present investigation. In general, the two populations with the highest prevalence rate of child psychiatric disorders, namely French and Turks, also had the highest rate of disturbed family functions. On the other hand, the Greek sample with the lowest rate of child psychiatric disorder had the lowest rate of disturbed family functions and the German sample scored in the middle. Therefore, the question arose whether or not child psychiatric disorder and family dysfunctions were correlated. At least for some of the assessed dimensions of family dysfunction it was possible to demonstrate clear correlations. This was the case in all samples for disturbed parental behaviour, impaired health of the mother, and other family problems. These three conditions clearly were most important, because the children who were seriously affected by these conditions also showed psychopathological abnormalities. Some of the samples examined also revealed similar correlations with disturbed marital relationships and impaired health of the father. In view of these manifest correlations there is some further evidence that child psychiatric disorders can be essentially ascribed, though not exclusively, to disturbances of family functioning.

Further analyses that have not been documented here clearly showed that other factors do not have the same impact. Among the Turks and Greeks neither the place of origin (rural vs provincial) nor the frequency of migration, change of school, living conditions, maternal occupation, nor the level of income had the same significance. Among the economically more privileged French migrants paternal absence clearly was correlated with maternal health and

well-being and thus may also have contributed indirectly to child functioning. Thus, there is sufficient evidence from this study that family dysfunctioning plays a greater role in the psychiatric disturbances of migrant children than any of the migration parameters investigated. This conclusion was also reached on the basis of a recent and similar German study with Italian and Turkish samples (Poustka 1984).

When comparing the findings of the two samples of Mediterranean origin in this study the question arises as to why these two migrant samples presented such different findings with regard to family functioning. One may assume that there are greater cultural pressures on the Turks resulting from discrepancies between oriental and patriarchal family structures as opposed to the greater egalitarianism in family and marital relationships in the host country. These discrepancies expose the Turks to greater adaptational stress which might greatly exceed their ability and willingness to adapt, whereas the Greeks react to the demands of migration by activating adaptive and protective forces. This interpretation is supported by the finding that, even when compared with the German families, the Greek families revealed fewer disturbed functions.

While these cultural factors may be important there is some evidence that socioeconomic conditions do not have the same impact. As described previously (Steinhausen 1985), in the Turkish, the Greek and the German samples there was no significant correlation between psychiatric status of the child and socioeconomic impairment. Furthermore, even among the highly privileged French sample the prevalence rate of child psychiatric disorders was remarkably high. By emphasizing ethnic and cultural factors we have, of course, recorded only one of several significant determinants of psychosocial adaptation among migrants. The interaction of other factors that might contribute towards the development of individual and family, both in the country of origin and in the new country of residence, still need to be studied. Among the factors that may be important are the transcultural differences in the way deviant behaviour in children is perceived or defined by parents. Although general categories of psychopathology are universally accepted and shared by professionals in various countries, the layperson may possess quite different norms for normal and abnormal behaviour in children. Such culturally determined views would certainly affect the responses of these parents when questioned about behaviour in epidemiological surveys. This problem still has to be addressed by future empirical studies.

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