

## ORIGINAL PAPER

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## Mental health in immigrant children in the Netherlands

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**Abstract** *Background* In the past decades, the ethnic diversity of the population in the Netherlands has rapidly grown. At present, approximately 10% of all people in the Netherlands belong to immigrant families that originate from a very large variety of non-Western nations. Although it is often assumed that migration has a stress-inducing effect, leading to heightened levels of

mental health problems in both immigrant children and their parents, research into this group of children is very scarce in Europe. In this paper, we want to report on the mental health of immigrant children originating from non-Western countries enrolled in a large cohort study in the Netherlands. *Method* A large sample of 11-year-old children in the Netherlands ( $n = 2230$ ) participated in the TRacking Adolescents' Individual Lives Survey (TRAILS). Approximately 10% of these children ( $n = 230$ ) belong to immigrant families originating from non-Western countries. Mental health problems were assessed using self-report measures (Youth Self-Report), using parent-report measures (Child Behaviour Check List) and using teacher report (Teacher Checklist for Psychopathology). In this paper, we report on the mental health problems of these children from all three perspectives (child, parent, teacher). In analysing the impact of immigrant status, the effect of gender and of socio-economic inequality was taken into account. *Results* According to self-report measures, mean level of mental health problems in immigrant children is comparable to that in non-immigrant children. Immigrant parents report higher problem rates for their daughters, in particular for internalising problem behaviours, social problems and attention problems, but not for their sons. In contrast, teachers perceive higher levels of externalising problem behaviour, but lower levels of anxious/depressed problems, social problems and thought problems in immigrant children. This last effect is most strongly found with respect to boys: teachers perceive less withdrawn/depressed problems, social problems, thought problems and attention problems in immigrant boys. *Conclusions* Children from immigrant families do not appear to experience more problems than their non-immigrant peers. However, parents from immigrant families do report more problems in their daughters than non-immigrant parents, in contrast to teachers who perceive lower levels of internalising, social and thought problems in particular in boys, and higher levels of externalising problems in both immigrant boys and girls. In describing problem behaviour in immi-

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grant children, the effect of diverging social contexts for and multiple perspectives on immigrant youth has to be taken into account.

■ **Key words** adolescence – mental health – socio-economic inequality – migration

## Introduction

In the past decades, the ethnic diversity of the population of the Netherlands has rapidly grown. Owing to the immigration of large numbers of people, at present approximately 10% of all people in the Netherlands can be considered as immigrants originating from a large and diverse number of non-Western, economically disadvantaged countries, most notably countries like Morocco, Turkey, Surinam and the Dutch Antilles (CBS 2004). However, whereas in the United States of America several studies have been conducted on large groups of children, of whom a substantial percentage belongs to ethnic minorities (most notably African Americans and Hispanics) (Angold et al. 2002; Halpern 1993; Jonas et al. 2003; McDermott and Spencer 1997; Nazroo 1998), in Europe such studies are scarce (Stevens et al. 2003; de Graaf et al. 2004). Results of studies conducted in the USA on ethnic minorities that have become part of American culture for centuries (e.g. African Americans) cannot, however, simply be translated to Europe, where recent immigration from a large number of non-Western countries has influenced society in a very different way. Furthermore, most attention in research on immigrant youth in Europe has been paid to either socio-economic issues or to the risk of marginalisation, as children from immigrant groups are overrepresented among institutionalised youth and in crime statistics (Barnes et al. 2002; Forehand et al. 1997; Junger and Marshall 1997; Junger-Tas 2001; Smith and Krohn 1995), whereas studies on mental health are very scarce. This is a remarkable gap in our knowledge. We find very few large-scale studies on mental health in immigrant children in Europe, with the exception of the Netherlands, where a large population study has been carried out on mental health problems of Turkish children in two big cities in the Netherlands (Bengi-Arslan et al. 1997; Janssen et al. 2004; Sowa et al. 2000), and a comparable study on Moroccan children in the same cities is just being analysed (Stevens et al. 2003). To our knowledge, these are the only large-scale studies on mental health conducted on immigrant children in the whole of Europe. The only other study we found was conducted in the upper North of Norway and compared mental health problems of Norwegian children with those in Sami children (Sami are native in this part of Norway) (Kringlen et al. 2001).

The major interest in mental health in migrant groups lies in the supposed higher prevalence of mental health problems in these groups. It is often assumed that migration is a stress-inducing process, leading to

heightened risk for the development of mental health problems in both children and their parents (Bengi-Arslan et al. 1997, 2002; Bhugra and Jones 2001; Halpern 1993; Karlsen and Nazroo 2002). Migration to a new country may be accompanied by acculturation stress, leading to increased levels of anxiety, depression, feelings of alienation, psychosomatic symptomatology and identity diffusion (Berry 1990). This stress-inducing effect of migration may be the major reason for the higher problem levels – both internalising and externalising problem behaviour – that were found in Turkish children in the Netherlands (Bengi-Arslan et al. 1997; Janssen et al. 2004; Murad et al. 2003). However, these former studies in the Netherlands – albeit unique in their focus on immigrant children – were restricted to particular ethnic groups (Turkish, Moroccan). Although this is an understandable approach – particularities within one ethnic group can, thus, be taken into account – it does not do justice to the huge ethnic variety of present immigrant groups in many Western European countries. Furthermore, it can be questioned whether belonging to one particular ethnic group is more important than being an immigrant in itself. Comparing migrant children and their parents with non-migrant groups can shed more light on the importance of migrant status.

In this article, we will report on the first results of the TRacking Adolescents' Individual Lives Survey (TRAILS), a large longitudinal study on adolescent development conducted in the Netherlands. The main aim of this study is to describe and explain the development of mental health problems from (pre)adolescence into adulthood. The aim of the present paper is to report on the mental health problems of immigrant children in comparison with their indigenous Dutch peers. Firstly, we assess whether more mental health problems are found in immigrant children in comparison to indigenous Dutch children. In doing so, we refrain from studying particular ethnic groups, like Turkish or Moroccan children. Instead, we will examine the effect of immigrant status, taking recent family migration (at least one of the parents not born in the Netherlands) as our main criterion for selection. Secondly, we examine whether any differences found can be accounted for by socio-economic disadvantage in immigrant groups. As most immigrants originate from socio-economically disadvantaged countries, it can be questioned whether possible problems in these groups are to be explained by immigrant status or rather by socio-economic disadvantage (poverty) in these groups (Karlsen et al. 2002; McDermott and Spencer 1997; McLoyd 1990). In order to detect to what extent this is the case, comparison with Dutch indigenous children after correction for socio-economic inequality is required.

Finally, the most recent study on Moroccan youth in the Netherlands revealed the importance of social context and report-perspective in establishing problem levels in migrant children. Whereas, according to Moroccan parents and children, problem levels in Moroccan chil-

dren appear to be as high as those in indigenous Dutch children, according to their teachers, Moroccan children display much higher levels of externalising problem behaviour than their indigenous Dutch peers (Stevens et al. 2003). Thus, we will assess mental health problems in migrant children hereby taking both the child's perspective, the parents' perspective and the teachers' perspective into account. In line with former studies, we might hypothesise that migrant children will tend to display externalising problem behaviour in particular outside their homes in class-room situations and, thus, we expect to find higher scores in particular in the perspective of the teachers of these children.

## Subjects and methods

### ■ Sample and procedure

The analyses reported in this article are based on the data from the first assessment wave of TRAILS, which ran from March 2001 to October 2002. TRAILS is a longitudinal study aimed at following a large cohort of pre-adolescents into adulthood. Sample selection involved two steps. Firstly, the municipalities selected were requested to give names and addresses of all inhabitants born between October 1 1989 and September 30 1990 (first two municipalities) or October 1 1990 and September 30 1991 (last three municipalities), yielding 3483 names. Simultaneously, primary schools (including schools for special education) within these municipalities were approached with the request to participate in TRAILS. School participation was a prerequisite for eligible children and their parents to be approached by the TRAILS staff, with the exception of children already attending secondary schools (< 1%), who were contacted without involving their schools. Of the 135 primary schools within the municipalities, 122 (90.4% of the schools accommodating 90.3% of the children) agreed to participate in the study.

If schools agreed to participate, parents (or guardians) were informed about the study and approached by telephone to participate in the study. Respondents with an unlisted telephone number were requested by mail to pass on their number. If they reacted neither to that letter nor to a reminder letter sent a few weeks later, staff members paid personal visits to their house. If parents agreed to participate, an interview was scheduled, during which they were requested to sign an informed consent form. Children were excluded from the study for several reasons: if they were incapable of participating due to mental retardation or a serious physical illness or handicap; or if no Dutch-speaking parent or parent surrogate was available, and it was not feasible to administer part of the measurements in the parent's language – with the exception of Turkish and Moroccan families (the largest group of migrants in the Netherlands) who were able to choose to be interviewed in their own language. Of all children approached for enrolment in the study (i. e. selected by the municipalities and attending a school that was willing to participate,  $N = 3145$ ), 6.7% ( $n = 210$ ) were excluded, 0.7% ( $n = 23$ ) due to language problems, and 0.4% ( $n = 13$ ) because their families were seeking asylum and did not have a permit to stay in the Netherlands (yet). Of the remaining 2935 children, 76% ( $N = 2230$ , mean age = 11.09,  $SD = 0.55$ , 50.8% girls) were enrolled in the study (i. e. both child and parent agreed to participate), of whom 1978 completed the questionnaires used in this paper. Responders and non-responders were as likely to come from single-parent families, but non-responders were somewhat more likely to be boys (57% vs. 49%) or to have low-educated parents (44% vs. 33%) (De Winter et al. 2004).

Well-trained interviewers visited one of the parents or guardians (preferably the mother, 95.6%) at their homes to administer an interview. In addition, the parent was asked to fill in a self-report questionnaire. Children were assessed at school, where they filled in questionnaires, in groups, under the supervision of one or more TRAILS assistants. In addition to that, information-processing capacities

(neurocognitive tasks), intelligence, and a number of biological parameters were assessed individually (also at school). Teachers were asked to fill in a brief questionnaire for all TRAILS children in their class. Measures that were used in the present study are described more extensively below.

For the present study, we identified adolescents with an immigrant family history, i. e. we selected adolescents who had at least one parent born in a non-Western country ( $N = 230$ ). These parents were born in Surinam (20%), Dutch Antilles (16%), Indonesia (16%), Morocco (6.5%), Turkey (5.5%), and other non-Western countries (36%), such as Iraq, Iran, Somalia, etc. The population of primary schools of TRAILS was comparable to primary schools in the Netherlands for the percentage of children with a low socio-economic background (16.1% and 15.3%, respectively) and the percentage of children belonging to a low socio-economic class and minorities from non-Western countries (11.1% and 11.3%, respectively).

### ■ Measures

Mental health problems of children were measured by the Youth Self-Report (YSR) and the Child Behaviour Check List (CBCL) (Achenbach 1991a, 1991b). The CBCL is a questionnaire designed to be completed by parents of children aged 4–18 years, and contains 101 problem items. The self-report version (YSR) is designed to be completed by adolescents aged 11–18 years. The items are scored as follows: 0 = not present, 1 = somewhat or sometimes true, 2 = very true or often true, on the basis of the preceding 6 months. The CBCL and YSR can be scored on the total problems scale, the sum of all problem scores, and the following eight syndrome scales: the 'Withdrawn behaviour', 'Somatic complaints', and 'Anxious/depressed' syndromes constitute internalising problems reflecting internal distress; the 'Delinquent behaviour' and 'Aggressive behaviour' syndromes constitute externalising problems reflecting conflicts with other people and their expectations of the individual; 'Social problems', 'Thought problems' (predominantly containing items on hallucinations, delusions and obsessive compulsive problems), and 'Attention problems' are not part of either the internalising or externalising scale. The reliability and validity of these scales are documented by Achenbach (1991a, 1991b), and confirmed for the Dutch translations (Verhulst et al. 1997).

Because we needed the information from teachers regarding the mental health of all pupils in their class, a new instrument was developed to allow teachers to report on problem behaviour in a less laborious fashion, the Teacher's Checklist of Psychopathology (TCP). This checklist contains nine descriptions of problem behaviours. Response options for each description of the checklist range from 0 = not applicable to 4 = very clearly or frequently applicable. The descriptions of the checklist were based on the variables used to measure various behaviours in the Teacher's Report Form (Achenbach 1991b). The reliability was assessed in a separate investigation among 36 teachers for 103 children. Within 3 months, teachers completed the Teacher's Report Form and the Teacher's Checklist for Psychopathology for the same children. Pearson correlation coefficients ranged from 0.50 to 0.69 for the nine descriptions.

Socio-economic status was assessed by a scale consisting of five variables: educational level (father/mother), occupation (father/mother), and family income. The internal consistency of these variables is satisfactory (Cronbach's alpha 0.84), indicating that these variables can be considered to represent the socio-economic status of the family. The lowest 25% of scores were considered to be the low SES, the highest 25% were considered to be the high SES, and the rest were labelled middle SES.

## Results

### ■ Immigrant families and socio-economic inequality

Firstly, we analysed whether children originating from different ethnic backgrounds differed with respect to socio-economic background. Results are shown in Table 1.

**Table 1** Socio-economic status in Dutch indigenous and migrant children in various ethnic groups

	N	Socio-economic status		
		Low <sup>1</sup> %	Middle %	High %
Dutch indigenous	1928	23.6	50.2	26.2
Turkish	12	75.0	25.0	0
Moroccan	15	73.3	26.7	0
Surinam	46	45.7	37.0	17.4
Antillean	37	37.8	48.6	13.5
Indonesian	38	29.7	59.5	10.8
Other non-Western countries	89	39.8	44.6	15.7

<sup>1</sup> Low SES: lowest 25 % of SES score; High SES: highest 25 % of SES score

As could be expected, immigrant children more often grow up in lower socio-economic status families. In comparison to Dutch indigenous children, Turkish and Moroccan children in particular are from lower socio-economic status families. Children from Caribbean groups (Surinamese, Antillean), those with an Indonesian background or those from other non-Western countries have somewhat higher socio-economic status, but it is still low in comparison to Dutch indigenous children. These results underline the fact that immigrant children in general originate from less-well-developed countries.

### ■ Mental health problems in immigrant children from the child's perspective

Regression analyses were conducted, taking scores on all syndrome scales, and on the aggregated internalising and externalising scales as the dependent variables, and

**Table 2** Mental health in migrant and Dutch indigenous children according to children

Syndrome scores Youth Self-Report	Migrant status (0 = indigenous; 1 = migrant) $\beta$	Gender (0 = boy; 1 = girl) $\beta$	SES (low; high) $\beta$	Interaction		
				M x G <sup>1</sup>	G x S	M x S
<b>Internalising problem behaviour</b>						
Withdrawn/depressed	0.03	0.02	-0.04*	-	-	**
Psychosomatic complaints	0.01	0.11*** <sup>2</sup>	-0.05*	-	-	-
Anxious/depressed	0.01	0.11***	-0.03	-	-	-
Total internalising	0.02	0.11***	-0.05*	-	-	-
<b>Externalising problem behaviour</b>						
Aggressive behaviour	-0.01	-0.15***	-0.04	-	-	-
Delinquent behaviour	-0.02	-0.20***	-0.05*	-	-	-
Total externalising	-0.02	-0.18***	-0.05*	-	-	-
<b>Other problem behaviour</b>						
Social problems	-0.04	-0.01	-0.06**	-	-	-
Thought problems	0.03	0.02	-0.03	(*)	-	-
Attention problems	-0.04	0.01	-0.01	-	-	-

<sup>1</sup> M migrant status; G gender; S socio-economic status

<sup>2</sup> Levels of significance: (\*) p < 0.1; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001

taking immigrant status, gender and socio-economic status of the family (SES) as predictor variables (see Table 2).

Clear gender differences are found that match expectations, girls scoring higher on internalising problems (with the exception of withdrawn/depressed problems) and boys scoring higher on externalising problems. In addition, small effects of SES are found for internalising and externalising problems – children from lower SES families indicating more problems – but not for the other problems. Taking these effects into account, the results show that immigrant children do not experience more problems than their Dutch peers. The only difference is found in thought problems: the interaction effect indicates that immigrant girls experience somewhat more thought problems than Dutch indigenous girls do, whereas immigrant boys do not score differently from Dutch indigenous boys. In addition, the interaction effect found for immigrant status and SES indicates an effect of immigrant status (immigrant children scoring higher on withdrawn/depressed problems) only in children from low SES families. Thus, in general, from the perspective of the immigrant children themselves, they do not appear to be a high-risk group.

### ■ Mental health problems in immigrant children from the parents' perspective

To analyse whether immigrant children differ from their Dutch indigenous peers according to their parents, regression analyses were again conducted taking parent scores on the different scales from the CBCL as dependent variables and immigrant status, gender and SES as predictor variables (see Table 3).

Gender effects indicating higher problem scores for boys are found for externalising problems, social prob-

**Table 3** Mental health in migrant and Dutch indigenous children according to parents

Syndrome scores Child Behaviour Check List	Migrant status (0 = indigenous; 1 = migrant)	Gender (0 = boy; 1 = girl)	SES (low; high)	Interaction		
	$\beta$	$\beta$	$\beta$	M x G <sup>1</sup>	G x S	M x S
Internalising problem behaviour						
Withdrawn/depressed	0.01	-0.09*** <sup>2</sup>	-0.08***	*	-	-
Psychosomatic complaints	0.10***	0.08**	-0.09***	*	-	-
Anxious/depressed	0.08***	0.03	-0.03	(*)	-	-
Total internalising	0.09***	0.01	-0.07**	*	-	-
Externalising problem behaviour						
Aggressive behaviour	0.01	-0.13***	-0.19***	-	(*)	-
Delinquent behaviour	0.02	-0.19***	-0.19***	-	**	-
Total externalising	0.01	-0.16***	-0.20***	-	*	-
Other problem behaviour						
Social problems	0.03	-0.06**	-0.14***	(*)	-	-
Thought problems	0.07**	-0.09***	-0.07**	-	-	-
Attention problems	0.02	-0.16***	-0.19***	*	-	-

<sup>1</sup> M migrant status; G gender; S socio-economic status

<sup>2</sup> Levels of significance: (\*)  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

lems, thought problems, attention problems and – somewhat unexpectedly – for withdrawn/depressed problems, whereas girls are scored higher on psychosomatic complaints. SES effects are found again with respect to all scales except anxious/depressed problems, indicating that children from lower SES families are perceived to have more problems. The gender\*SES interactions found with respect to externalising problems indicate that this effect is strongest in boys. Taking these effects into account, our results indicate that in contrast to the scores of the children, immigrant parents report higher levels of psychosomatic complaints, anxious/depressed problems and thought problems for their children. The interactions found between migrant status and gender indicate that parents perceive more problems for their daughters, but not for their sons, on all syndromes of the CBCL except externalising behaviour and thought problems. Thus, from the perspective of immigrant parents, their daughters appear to be at higher risk for almost all behaviour problems except externalising problems and thought problems.

### ■ Mental health problems in immigrant children from the teachers' perspective

According to teachers, boys appear to be at higher risk for externalising problems, social problems and attention problems. In addition, children from lower SES families appear to be at far higher risk for all problems. The gender\*SES interactions found here indicate that the effect of SES is perceived to be particularly strong for externalising problems in boys. Taking these effects into account, according to teachers, several differences are to be seen between the problem behaviour of immigrant children in comparison to their Dutch peers. They perceive more delinquent behaviour in immigrant children,

but *less* anxious/depressed problems and less social problems and thought problems in immigrant children. The interactions found between gender and migrant status indicate that teachers perceive less withdrawn-depressed problems, less social problems, thought problems and attention problems in particular in immigrant boys. Likewise, the interaction found between migrant status and SES indicates that the effect of migrant status (perception of less thought problems in immigrant children) is found in particular in children from lower SES families (Table 4).

## Discussion

Whether immigrant children are to be seen as being at risk for mental health problems appears to be largely dependent upon the perspective used to describe their actual level of problem behaviour. According to the early adolescents themselves, there is not much reason to worry about the effects of migration. Their self-reported level of problem behaviour matches that of their indigenous Dutch peers. These results are in line with the finding that, in general, children tend to accommodate to a new host country at a faster pace than their parents (Knight et al. 1992; Szapocznik and Kurtines 1993). We should, however, consider the fact that these children are still very young. As mental health problems often tend to increase during adolescence, differences between immigrant and non-immigrant youth might increase accordingly in the course of the next few years.

In contrast, according to the parents, their children are at higher risk for internalising problems and thought problems, and in particular their daughters are at higher risk for internalising problems, social problems and attention problems. Several explanations can account for these results. Firstly, immigrant parents might experi-

**Table 4** Mental health in migrant and Dutch indigenous children according to teachers

Syndrome scores Teacher Checklist for Psychopathology	Migrant status (0 = indigenous; 1 = migrant)	Gender (0 = boy; 1 = girl)	SES (low; high)	Interaction		
	$\beta^1$	$\beta^2$	$\beta^3$	M x G <sup>4</sup>	G x S	M x S
<b>Internalising problem behaviour</b>						
Withdrawn/depressed	-0.02	-0.04	-0.15*** <sup>5</sup>	**	-	-
Psychosomatic complaints	-0.02	0.02	-0.16***	-	-	-
Anxious/depressed	-0.07**	-0.04	-0.10***	-	-	-
Total internalising	-0.04	-0.02	-0.18***	*	-	-
<b>Externalising problem behaviour</b>						
Aggressive behaviour	0.04	-0.23***	-0.19***	-	**	-
Delinquent behaviour	0.06*	-0.18***	-0.16***	-	***	-
Total externalising	0.06*	-0.23***	-0.20***	-	***	-
<b>Other problem behaviour</b>						
Social problems	-0.09***	-0.10***	-0.18***	*	-	-
Thought problems	-0.05*	-0.03	-0.09***	(*)	-	**
Attention problems	0.02	-0.19***	-0.25***	*	-	-

<sup>1</sup> M migrant status; G gender; S socio-economic status

<sup>2</sup> Levels of significance: (\*)  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

ence more migration stress than their children, because they feel responsible for the well-being of their family and children in a new host country. Former research has revealed that parental problems are related to the perception of problems in their children (Kroes et al. 2003). Thus, a possible higher level of parental stress might lead to the perception of more internalising problems in their children, in particular in their daughters, towards whom they might feel especially protective. Secondly, a series of recent studies on parenting in a large variety of non-Western families in the Netherlands has revealed that, compared to indigenous Dutch families, the style of parenting in non-Western families can be characterised as more authoritarian (Deković et al. 2003, 2004; Pels and Nijsten 2003). We might hypothesise that due to more authoritarian parenting, the behaviour of children – in particular girls – towards their parents may be more submissive or anxious at home than in other social contexts (Bengi-Arslan et al. 1997). Since parents develop their perceptions of problems in their children in interactions at home, they may, therefore, perceive – and report – more anxious or depressed behaviour in their daughters, while outside the home this behaviour in their daughters may be less outspoken.

In contrast to parents and children, teachers tend to report less anxious/depressed problems and a lower level of social problems and thought problems in immigrant children, in particular in boys. On the other hand, according to teachers, delinquent problem behaviour in immigrant youth – both girls and boys – appears to be higher than the level found in indigenous Dutch youth. This is a remarkable finding. It matches earlier results found by Stevens et al. (2003), who also found a much higher level of externalising problem behaviour in Moroccan children according to their teachers, but not according to the parents or the children themselves. This teachers' report of more delinquent behaviours in im-

migrant youth may reflect the actual behaviour of these children, or be a result of a more stereotypical perspective on immigrant children. Research findings so far leave both options open. On the one hand, data on criminality in the Netherlands have revealed an overrepresentation of immigrant adolescents in delinquent acts and in judicial institutions in the Netherlands (Vollebergh 2002). Higher levels of externalising problem behaviour at younger ages usually precede a higher level of criminality in older youth. Teachers of these children may be the first Dutch authority figures to encounter these problems at an earlier stage. On the other hand, the high criminality rates among immigrant youth have attracted a lot of media attention and may have led to a rather stereotypical image of immigrant adolescents (Stevens et al. 2004; Vollebergh 2002). The teachers' perception of immigrant children may more or less consciously have been biased by this image. The hypothesis that teachers may overreport externalising problem behaviour in immigrant youth is in accordance with results found by Sonuga-Barke et al. (1993), who reported higher teacher ratings of behaviour problems in Asian boys, whereas in actuality (assessed by observational measures) these children were less hyperactive. The hypothesis that teachers tend to underreport internalising problems in immigrant children matches results from Crijnen et al. (2000) that Dutch indigenous teachers tend to report less problems in the same Turkish children than Turkish teachers do. Finally, it seems reasonable to assume that a certain amount of mutual trust is necessary for children to reveal internalising or thought problems to adult figures like teachers. Immigrant children, in particular boys, may feel less comfortable in the presence of their teachers – who in primary schools in the Netherlands are mostly females – and, as a result, they may reveal inner feelings of fear or weakness less easily than their Dutch indigenous peers do. If so, it may also

be more difficult for teachers to detect internalising problems in particular in immigrant boys. Future studies will have to reveal to what extent these hypotheses will hold.

Several limitations of our study have to be addressed. Firstly, in our study we had to rely on parent, child and teacher reports of children's problem behaviours, as we did not have access to clinical diagnoses made by trained clinical interviewers or professionals in the field of mental health. The relevancy of these differing perspectives has been clearly shown in this paper. The interpretation of our data, in particular the divergence in teacher and parent reports, would have been improved if we had been able to include the professional perspective on the mental health problems of the children as well. Secondly, the number of immigrant families in this sample does not allow additional interpretation of our results with respect to different immigrant backgrounds. On the other hand, this study is the first to enable comparison of the mental health problems of immigrant youth with those of their Dutch indigenous peers in the general population, hereby using a joint sample frame and the same measurement instruments, and taking account of both child, parent and teacher perspectives, whereas former studies did not allow for such comparisons.

Notwithstanding these limitations, our results underline the importance of immigrant status for mental health in early adolescence. In addition, our results point to the importance of the perspective of not only the children and their parents themselves, but also the perspective of teachers. We should bear in mind that immigrant children may experience a wider gap between the more traditional values encountered in their homes and the more modern values and behavioural standards experienced in the social context of the Dutch schooling system (Phalet et al. 2000; Pels 2003). Children themselves may act in accordance with these differences and may, thus, contribute to the discordance between the parents' and teachers' reports of possible problems in the same child. Clearly, it is important to take into account all three perspectives in order to acquire a full understanding of the problems of immigrant youth. In particular, the diverging results of teachers' ratings of problem behaviour should be addressed in future research, in order to achieve a fuller understanding of why these externalising problem rates in immigrant children tend to be higher. Socio-economic inequality should hereby be taken into account, as the effect of lower socio-economic status proves to be of importance with respect to virtually all measures.

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## References

1. Achenbach TM (1991a) Manual for the Child Behaviour Checklist/4-18 and 1991 profile. Burlington VT: University of Vermont
2. Achenbach TM (1991b) Manual for the Youth Self Report and 1991 profile. Burlington VT: University of Vermont
3. Angold A, Erkanli A, Farmer EMZ, Fairbank JA, Burns BJ, Keeler G, Costello EJ (2002) Psychiatric disorder, impairment and service use in rural African American and white youth. *Arch Gen Psychiatry* 59:893-901
4. Barnes GM, Welte JW, Hoffman JH (2002) Relationship of alcohol use to delinquency and illicit drug use in adolescents: gender, age and racial/ethnic differences. *J Drug Issues* 32:153-178
5. Bengi-Arslan L, Verhulst FC, Crijnen AAM (2002) Prevalence and determinants of minor psychiatric disorder in Turkish immigrants living in the Netherlands. *Soc Psychiatry Psychiatr Epidemiol* 37:118-124
6. Bengi-Arslan L, Verhulst FC, Ende J van der, Erol N (1997) Understanding childhood (problem) behaviours from a cultural perspective: comparison of problem behaviours and competencies in Turkish immigrant, Turkish and Dutch children. *Soc Psychiatry Psychiatr Epidemiol* 32:477-484
7. Berry JW (1990) Psychology of Acculturation. In: JJ Berman (ed) *Cross-cultural Perspectives: Nebraska Symposium on Motivation 1989* (pp 201-234). Lincoln and London: University of Nebraska Press
8. Bhugra D, Jones P (2001) Migration and mental illness. *Advances in Psychiatric Treatment* 7:216-223
9. CBS (2004) Statline. [www.cbs.nl/statline](http://www.cbs.nl/statline) (information on population statistics in the Netherlands by the Central Bureau of Statistics in the Netherlands)
10. Crijnen AAM, Bengi-Arslan L, Verhulst FC (2000) Teacher-reported problem behaviour in Turkish immigrant and Dutch children: a cross-cultural comparison. *Acta Psychiatr Scand* 102: 439-444
11. De Graaf R, Ten Have M, Van Dorsselaer S, Schoemaker C, Vollebergh W (2004) Etniciteit in psychiatrisch epidemiologische bevolkingsstudies (Ethnicity in psychiatric epidemiologic population studies). Utrecht: Trimbos-institute
12. Deković M, Janssens JMAM, As NMC van (2003) Family predictors of antisocial behaviour in adolescence. *Family Process* 42:223-235
13. Deković M, Pels T, Model S (Eds.) (2004) *Unity and diversity in child rearing: Family life in a multicultural society*. Ceredigion, UK: The Edwin Mellen Press
14. De Winter A, Oldehinkel AJ, Veenstra R, Brunnekreef A, Verhulst FC, Ormel J (2004) Evaluation of Nonresponse Bias in Mental Health Determinants and Outcomes in a Large Sample of Preadolescents. Manuscript submitted for publication
15. Forehand R, Miller KS, Dutra R, Chance MW (1997) Role of parenting in adolescent deviant behaviour: replication across and within two ethnic groups. *J Consult Clin Psychol* 65:1036-1041
16. Halpern D (1993) Minorities and mental health. *Soc Sci Med* 36:597-607
17. Janssen MMM, Verhulst FC, Bengi-Arslan I, Erol N, Salter CJ, Crijnen AAM (2004) Comparison of self-reported emotional and behavioural problems in Turkish immigrant, Dutch and Turkish adolescents. *Soc Psychiatry Psychiatr Epidemiol* 39:133-140
18. Jonas BS, Brody D, Roper M, Narrow WE (2003) Prevalence of mood disorders in a national sample of young American adults. *Soc Psychiatry Psychiatr Epidemiol* 38:618-624
19. Junger M, Hean Marshall I (1997) The inter-ethnic generalizability of social control theory: An empirical test. *J Research in Crime and Delinquency* 34:79-112
20. Junger-Tas J (2001) Ethnic minorities, social integration and crime. *Eur J Crim Policy Res* 9:5-29
21. Karlson S, Nazroo JY (2002) Relation between racial discrimination, social class, and health among ethnic minority groups. *Am J Public Health* 92:624-631

22. Knight GP, Tein JY, Shell R, Roosa M (1992) The cross-ethnic equivalence of parenting and family interaction measures among Hispanic and Anglo-American families. *Child Dev* 63: 1392–1403
23. Kringlen E, Torgersen S, Cramer V (2001) A Norwegian psychiatric epidemiological study. *Am J Psychiatry* 158:1091–1098
24. Kroes G, Veerman JW, De Bruyn EEJ (2003) Bias in parental reports? Maternal psychopathology and the reporting of problem behaviour in clinic-referred children. *Eur J Psychol Assess* 19: 195–203
25. McDermott PA, Spencer MB (1997) Racial and social class prevalence of psychopathology among school-age youth in the United States. *Youth and Society* 28:387–414
26. McLoyd VC (1990) The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Dev* 61:311–346
27. Murad SD, Joung IMA, Lenthe FJ van, Bengi-Arslan L, Crijnen AAM (2003) Predictors of self-reported problem behaviours in Turkish immigrant and Dutch adolescents in the Netherlands. *J Child Psychol Psychiatry* 44:412–423
28. Nazroo JY (1998) Rethinking the relationship between ethnicity and mental health: the British Fourth National Survey of Ethnic Minorities. *Soc Psychiatry Psychiatr Epidemiol* 33:145–148
29. Pels T (2003) The question of respect. Socialisation and misconduct of Moroccan boys in the Netherlands. *The Netherlands' J Soc Sci* 39:126–142
30. Pels T, Nijsten C (2003) Myths and realities of diversity and parent-child relations: A comparison of indigenous and non-indigenous families in The Netherlands. In: L Hagendoorn, J Veenman, W Vollebergh (eds) *Integrating immigrants in The Netherlands. Cultural versus socio-economic integration* (pp 63–90). Aldershot/Burlington, UK: Ashgate
31. Phalet K, Vanlotringen C, Entzinger H (2000) *Islam in de multi-culturele samenleving. Opvattingen van jongeren in Rotterdam*. Utrecht: ERCOMER
32. Sonuga-Barke EJS, Monocha K, Taylor EA, Sandberg S (1993) Inter-ethnic bias in teachers' ratings of childhood hyperactivity. *Br J Dev Psychol* 11:187–200
33. Sowa H, Crijnen AAM, Bengi-Arslan L, Verhulst FC (2000) Factors associated with problem behaviours in Turkish immigrant children in the Netherlands. *Soc Psychiatry Psychiatr Epidemiol* 35:177–184
34. Smith C, Krohn MD (1995) Delinquency and family life among male adolescents: The role of ethnicity. *J Youth Adolesc* 24:69–93
35. Stevens GWJM, Pels T, Bengi-Arslan L, Verhulst FC, Vollebergh WAM, Crijnen AAM (2003) Parent, teacher and self-reported problem behaviour in The Netherlands. *Soc Psychiatry Psychiatr Epidemiol* 38:576–585
36. Stevens GWJM, Vollebergh W, Pels T, Verhulst FC, Crijnen AAM (2004) Patterns of parenting and problem behaviour in Moroccan children in the Netherlands. Manuscript submitted for publication
37. Szapocznik J, Kurtines WM (1993) Family psychology and cultural diversity. Opportunities for theory, research and application. *Am Psychol* 48:400–407
38. Verhulst FC, Van der Ende J, Koot HK (1997) *Handleiding voor de Youth Self Report (YSR)* [Manual for the Youth Self Report (YSR)]. Rotterdam: Sophia Children's Hospital Rotterdam
39. Vollebergh WAM (2002) *Gemiste kansen. Culturele diversiteit en de jeugdzorg* (Missed chances, Cultural diversity and youth care). University of Nijmegen