

Ethnic Differences in Pathways in Care for Young Children with Problem Behaviour: road work in progress

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Thesis Erasmus MC, University Medical Centre Rotterdam

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Ethnic Differences in Pathways in Care for Young Children with Problem Behaviour: road work in progress

Etnische verschillen in zorgpaden van jonge kinderen met probleemgedrag: werk aan de weg

Proefschrift

ter verkrijging van de graad van doctor aan de Erasmus Universiteit Rotterdam op gezag van de rector magnificus

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Chapter 1

General Introduction

GENERAL INTRODUCTION

The study described in this thesis explores ethnic differences in the process of help-seeking for emotional and behavioural problems in 5-6-year-old children in a Dutch preventive care setting. Research has shown that early detection of emotional and behavioural problems in childhood is possible and can be beneficial to a child's development, well-being and health [1-3]. Preventive child health care services, like we know in the Netherlands, can be regarded as an ideal setting for early identification and early management of emotional and behavioural problems through its routine health examinations of the entire population of children. However, identification of problems in itself is not a guarantee for an adequate solution of these problems. To justify screening for emotional and behavioural problems, insight into pathways in care following identification is necessary. Such insight can show which children with emotional and behavioural problems need care and whether these children receive the care they need. Until now, little is known about these pathways in care, especially pathways in care of young children from ethnic minority groups. It is important to investigate if such pathways apply in the same manner to ethnic minority children as to ethnic majority children. Ethnic differences in mental health problems are frequently cited as justification for the need to intervene in particular populations. However, understanding the reasons behind these disparities is often challenging and critical for the effectiveness of such interventions. Until now, this understanding is still largely lacking. Therefore, the first aim of this thesis is to describe ethnic differences in pathways in care after detection of emotional and behavioural problems in young children. The second aim of this thesis is to explore ethnic differences in determinants of care use through quantitative research methods as well as through qualitative research methods.

ETHNIC DIFFERENCES IN PATHWAYS IN CARE

Background

The prevalence of emotional and behavioural problems is comparable over countries [4, 5] and ranges from 17% to 26% for school-aged children [6-9], with 7% being rated as severely disturbed by clinicians [9]. Emotional and behavioural problems, if left untreated, may interfere with the everyday functioning of some children and their families [3]. A variety of health and behaviour difficulties later in life are often related to an early onset of emotional and behavioural problems [10, 11]. For example, these problems in early childhood show to be a risk factor for mental health problems during adolescence, as well as in adulthood [12-16]. Although many children with emotional and behavioural problems do not grow into adults with mental health problems, taking early action offers possible solutions at relatively low cost. Chronic behavioural difficulties among a minority of children may become more severe and more resistant to treatment as time passes [17], which may result in much more invasive efforts for the individual and for society to treat the problems. Results of randomised controlled trials show that treatment programs can be effective in the reduction of problem behaviour, and early intervention shows to be more effective than treatment at a later age [2, 18-22]. An evaluation of 130 preventive mental health

programs for children and adolescents from several ethnic groups showed that such programs can significantly reduce problems and increase competencies [23]. These days, more and more of these programs are tailored to particular cultural groups and are modified to suit the needs and preferences of the children involved [24].

According to some studies, emotional and behavioural problems are reported more frequently in children belonging to an ethnic minority than in children of the ethnic majority [25-27]. In contrast, empirical research is not unequivocal in reporting an increased risk in mental health problems in all ethnic minority children [27]. There is some evidence that children from specific ethnic minority groups actually have a mental health advantage in comparison with children from ethnic majority groups [27, 28]. However, due to heterogeneity in the designs of these studies, it is hard to make conclusive statements about the prevalence of emotional and behavioural problems in ethnic minority children. This heterogeneity emanates from the use of different informants and different procedures to assess children's problems and the lack of univocal definitions comprising key terms like 'ethnic minority' and 'native population' [29]. However, irrespective of the prevalence of problem behaviour, recent studies suggest that children from an ethnic minority less often receive treatment for emotional and behavioural problems than ethnic majority children [30-32], in the Netherlands for example, in 5-11-year-old children. Differences remain after adjustment for ethnic differences in the severity of problem behaviour [32]. Yet, the number of studies into ethnic differences in care use for emotional and behavioural problems in young school-aged children is still limited. Moreover, most of these studies only focus on a specific stage of the help-seeking process. Therefore, more insight is needed in pathways in care (comprising all stages of the help-seeking process). In this way we can better explain ethnic differences in care use of young children with emotional and behavioural problems.

The Levels and Filters model

Models that describe help-seeking pathways, such as the 'Levels and Filters model' by Goldberg and Huxley (1980, 1992), can be useful in explaining ethnic differences in access to, and use of, mental health care [33, 34]. In the Levels and Filters model, help-seeking is described as a stage-like process. Verhulst and Koot (1992) adapted the Levels and Filters model and made it applicable to the process of help-seeking for mental health problems in children [35]. The levels in their model represent different circumscribed populations of children with mental health problems, ranging from the lowest, broad level of 'community' to the highest, narrow level of 'inpatients'. The filters describe the selection process that determines whether treatment is sought and received. To move to a next level in the process of help-seeking, it is necessary to pass through a corresponding filter. For young children, parental problem recognition is usually considered as the first filter of the help-seeking process, since these children are too young to recognise their problems and seek help themselves. In the model, problem recognition in parents is followed by problem recognition by a professional, referral and admission to inpatient mental health care [33-36]. Research has shown that inequalities in access to care appear at all levels of the help-seeking process, and several determinants of care use in parents of young children have been described, such as parental perception of problems, past treatment of parents and relatives, age of the child,

informal help-seeking and family size [37, 38]. Nevertheless, how ethnicity exactly influences this process remains unclear.

Preventive child health care in the Netherlands

In the past two decades there has been an increasing awareness of the importance of early identification of emotional and behavioural problems in children [39]. This has resulted in several initiatives for improving identification of these problems in young children, such as the use of validated questionnaires to signal emotional and behavioural problems at an early stage [39, 40]. In the Netherlands, preventive child health care is one of the most important low-threshold services for an early detection of emotional and behavioural problems in children. The Dutch preventive care system offers publicly funded preventive programs for all children from birth to the age of 19. The preventive care system is instrumental in monitoring and safeguarding the physical and mental development of all children. As a part of this system, well-baby clinics are offered as a service to parents with children of 0-4 years old, and more than 90% of all children undergo 3 to 4 routine health assessments by a child health professional (CHP) during their school careers; the first takes place in grade two of primary school (mean age: 5-6 years). Screening questionnaires are used to identify children with emotional and/or behavioural problems before the routine health assessment with the CHP. During the health assessment the CHP discusses the psychosocial well-being of the child with the parents. The CHP can give parents of children with problem behaviour advice and/or reassurance, the CHP can make a new appointment with the parents and the child for further diagnosis and/or counselling and the CHP can refer these children to professional care. Children can, for example, be referred to the child mental health system, which in the Netherlands provides psychiatric diagnostic assessment, outpatient and inpatient treatment. Furthermore, the CHP can refer children and their parents to preventive care (for example to enhance parenting skills), to specialised youth social work or child protective services and to other sources of care (e.g. care provided by school).

DETERMINANTS OF ETHNIC DIFFERENCES IN PATHWAYS IN CARE

Problem perception and perceived need for care

The Levels and Filters model can be used, apart from describing pathways in care, to explore which determinants of help-seeking influence the help-seeking process. A central element of the model is the assumption that progress on pathways in care is influenced by other variables, which can either facilitate or obstruct progress to the subsequent help-seeking stages. For this reason, several researchers have expanded the general Levels and Filters model. According to Logan and King (2001), several stages in the first filter (parental problem recognition) can be distinguished, among which: parents' initial acknowledgment of their child's distress and parents recognising that the problem is psychological and severe enough to merit professional care [41]. These stages are comparable to the respective concepts of problem perception and perceived need for professional care, as we used in this study.

In most previous studies problem recognition is deemed present following a high score on a screening questionnaire or diagnostic interview [38], although this does not imply that parents also perceive the behaviour of their child as problematic and consider seeking professional help. Zwaanswijk et al. (2006) found a large discrepancy between problem perception by parents when asked directly, and problem behaviour as determined by a high problem score on a parent screening questionnaire. Less than half of the parents of 4-17-year-old children who reported problems in the deviant range of the Child Behaviour Checklist [42] had a corresponding problem perception [43]. Parental and teacher's problem perception and perceived need for care are important predictors of referral and care use in young children with emotional and behavioural problems [44, 45]. Problem perception and perceived need for care can be studied as separate determinants of the process of help-seeking for children with mental health problems, besides, but also in combination with measures of problem behaviour. The question is whether and in which way the combination of these measures ultimately can discriminate between problem behaviour that merits professional attention and/or care and problem behaviour that does not.

Studies among older children show that parental problem perception and perceived need for care differs between ethnic groups. For example, in the United States African-American parents reported less problem perception of ADHD-symptoms than ethnic majority parents of schoolaged children [46]. Similarly, for adolescents, caregivers from the ethnic majority were more likely than minority parents to report problems [47]. Further, parents of 9-17-year-old children reported less need of mental health care services in ethnic minority children than in ethnic majority children [48]. However, studies on ethnic differences in problem perception and perceived need for care among the youngest school-aged children (5-6 years old) are scarce, especially studies that also take the perceptions of teachers into account.

Ethnic differences in problem perception and perceived need for professional care may be important in the light of ethnic differences in care use. According to the Levels and Filters model, care use is preceded by recognition of problems and subsequent referral by a professional [33-35]. The recognition of problems in children by a child health professional (CHP) seems to be largely dependent on parental problem recognition. For example, in the United Kingdom parental problem perception and expression of concern during a consultation with a CHP increased the sensitivity of problem recognition by the CHP from 26% to 88% [49]. In the Netherlands, ethnic minority children whose parents reported child problems in the deviant range of the Child Behavior Checklist (CBCL) [42] were less often identified by a CHP as having a problem than ethnic majority children [50]. This may mean ethnic differences in referral and care use are related to differences in problem perception and perceived need for professional care between ethnic minority groups and ethnic majority groups. However, this association has so far not extensively been studied.

Explanatory models and beliefs

Besides problem perception and perceived need for professional care being two important determinants of care use, other determinants of help-seeking can be influenced by ethnicity as well. However, not all culturally defined determinants can be explored properly using quantitative research, considering the subjective nature of these determinants. Qualitative research is a more appropriate way to address research questions aimed at discovering and describing social and cultural phenomena in specific situations or settings. Important models that can help explain ethnic differences in health care use focus on health beliefs and explanatory models of the parents [51, 52].

Kleinman's socioanthropological theory of family explanatory models suggests that individuals have unique explanations and beliefs regarding the cause and possible cure of problem behaviour, which can be influenced by culture [52]. Two main models can be distinguished: biopsychiatric models, which emphasise the roots of the problems in anatomy, heredity and disease processes, and situational models, which describe psychological distress in the context of social and interpersonal situations [52]. Earlier research on explanatory models and beliefs regarding depression suggests that situational models are often associated with negative beliefs about professional treatment as solution for the problems [53]. The qualitative approach is particularly useful in answering research questions about the beliefs and motives behind the ethnic differences in child mental health care use [54]. Through capturing the thinking process of parents, qualitative research can help us understand why ethnic differences in help-seeking behaviour exist.

This thesis

The central aim of this study is to explore ethnic differences in the pathways in care of 5-6- year-old children with emotional and behavioural problems. We identified children with emotional and behavioural problems by using parent and teacher reports on a validated questionnaire, which is part of the Dutch preventive health care system. In this thesis - using the Levels and Filters model as a central framework - the following research questions are addressed:

- I. Are there ethnic differences in specialist mental health care use in 5-6-year-old children with problem behaviour (Chapter 2)?
- 2. How can we accurately describe pathways in care in 5-6-year-old children with problem behaviour, to determine in which measure unmet need exists within this group (Chapter 3)?
- 3. Are there ethnic differences in parental and teacher's problem perception and perceived need for professional care in 5-6-year-old children with problem behaviour (Chapter 4)?
- 4. Do ethnic differences in problem perception and perceived need for care predict ethnic differences in referral at the routine health assessment (Chapter 5)?
- 5. Do ethnic differences exist among parents with regard to beliefs and explanatory models about their child's emotional and behavioural problems and, if so, how can these differences help us understand why few children receive (specialist) mental health care (Chapter 6)?

METHODS

Study population

In the school year 2008-2009, from a total of 11,987 children enrolled in grade two (5-6 years old) of 94% of all mainstream elementary schools in the Rotterdam-Rijnmond area in the Netherlands, 10,951 children were screened with the Strengths and Difficulties Questionnaire (SDQ).

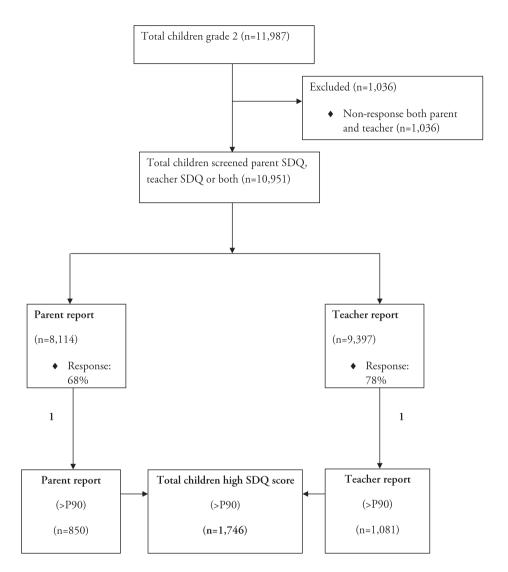


Figure 1. Flowchart of the sampling process

1: Only children with high SDQ scores (>P90) were included in the study sample

Questionnaires were distributed by the Rotterdam Municipal Health Service through schools to parents and teachers for use as a signalling tool in preventive child health care. In total, for 8,114 (68%) children parents filled out the questionnaire and in total for 9,397 (78%) children teachers filled out the questionnaire. A total of 1,746 children had a high SDQ score reported by parent, teacher or both. A high SDQ total score was defined as a score above the 90th percentile (>P90) in the total group of 10,951 children. We used the group of 1,746 children with a high SDQ score as study sample. In the study sample, 850 children had a high SDO score according to parent report, 1,081 children had a high score according to teacher report and 154 children had a high SDQ score according to both. The selection of the study sample is presented in Figure 1.

In this thesis we describe ethnic differences in pathways in child mental health care and youth care in the 18 months following signalling problem behaviour with the SDQ. Only screen-positive children were followed up. Data on pathways in care were derived from electronic child records from the Youth and Family Centres (Centra voor Jeugd en Gezin), the registry of Youth Health Care Services (Bureau Jeugdzorg) and the registry of mental health care services (Psychiatrisch Casusregister Rotterdam-Rijnmond). For some of the chapters in this thesis, data from all screenpositive children were analysed, whereas for other chapters a selection criterion was applied.

Background of the different ethnic groups in the Netherlands

A high proportion of the children in the Rotterdam-Rijnmond area is of non-Dutch origin. The largest ethnic minority groups living in the Netherlands migrated from Mediterranean countries, mainly Turkey and Morocco, as labour migrants since the 1960s and early 1970s. Surinamese and Antillean migrants came, from South America and the Caribbean respectively, to the Netherlands during the process of decolonisation after 1975. The group containing other ethnicities is very diverse, since this group is comprised of, among others, labour migrants, refugees and knowledge migrants. In this thesis, a child was classified as ethnic Dutch, Surinamese, Antillean, Turkish, Moroccan or other, based on the country of birth of the child and at least one of his/her parents [55]. If the country of birth of one of the parents, or the child itself was outside the Netherlands, the child was classified as non-Dutch [55].

Chapter 2

Ethnicity, socioeconomic position and severity of problems as predictors of mental health care use in 5-8-year-old children with problem behaviour

Submitted for publication

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ABSTRACT

Background

Empirical research on mental health care use and its determinants in young school-aged children is still scarce. In this study, we investigated the role of ethnicity, socioeconomic position (SEP) and perceived severity by both parents and teachers on mental health care use in 5-8-year-old children.

Methods

Data from 1,269 children with a high score (>P90) on the Strengths and Difficulties Questionnaire in the school year 2008-2009, were linked to psychiatric case register data over the years 2010-2011. Cox proportional hazards models were used to predict mental health care use from ethnicity, SEP and perceived severity of the child's problems.

Results

During the follow-up period II7 children with high SDQ scores (9.2%) had used mental health care for the first time. Ethnic minority children were less likely to receive care than Dutch children (HR Moroccan/Turkish: 0.26; 95% CI: 0.13-0.54, HR other ethnicity: 0.26; 95% CI: 0.12-0.58). No socioeconomic differences were found. Parental and teachers' perceived severity were positively associated with mental health care use 24 months later (HR parents: I.08; 95% CI: I.02-I.13, HR teachers: I.06; 95% CI: I.04-I.08).

Conclusions

Ethnicity is an important predictor of mental health care use in young children. Already in the youngest school-aged children, ethnic differences in the use of mental health care are present. A distinct predictor of care use in this age group is severity of problems as perceived by teachers. Therefore, teachers may be especially helpful in the process of identifying young children who need specialist mental health care.

INTRODUCTION

Detection and treatment of emotional and behavioural problems at an early age is becoming more and more important [56], especially since we know that these problems can influence children's daily lives negatively [3] and tend to be persistent if left untreated [12, 14]. Therefore, the development of empirically informed public policies with regard to a proper response to such problems in young children is a priority on the global health agenda [57, 58]. One way of treating emotional and behavioural problems in young children is through offering specialist mental health care. However, research on exact rates and characteristics of mental health care use in the youngest school-aged children (5-8 years old) is still scarce.

Rates of mental health care use in children differ within and across countries [29, 37], since service organisation and availability of services differ greatly [59]. In Western countries, between 5% and 21% of all children in the community have used some sort of service for mental health problems in the previous year [37]. Rates of specialist mental health treatment for children across countries are lower: up to 8% of all children have used these services [37]. Most of the large community studies on child psychopathology and care use, however, do not include the youngest school-aged children [29]. The Great Smoky Mountains study and the Methodology for Epidemiology in Children and Adolescents study (MECA), for example, both begin at age 9 [59, 60]. A rare exception is a study in the United States that described mental health care use in a nationally representative sample including 3-5-year-old children as well as older children [61].

Studying the characteristics of children receiving mental health care is complex, since there are large differences in sample selection, diagnostic criteria, definition of service use and age range across studies [62]. Nevertheless, studying these characteristics is important, since differences in mental health care use across ethnicities and socioeconomic position groups have been consistently reported in older children [29, 37, 63]. A review by Flores et al. (2010) indicated lower service use and under-treatment for ADHD in ethnic minority groups [64]. Other studies examining ethnicity as predictor of service use in children, however, show both over- and underrepresentation of mental health care use in ethnic minority groups [29]. The association between socioeconomic position (SEP) and service use is somewhat contradictory throughout literature. Whereas some studies reported no associations with SEP [37, 65], other studies reported that low SEP was slightly associated with more service use [15, 66, 67]. Furthermore, other research indicates greatest use in middle or high socioeconomic position groups [68, 69]. These findings may reflect differences in care use and accessibility across countries [37], or may reflect methodological differences between studies, like sample size and different definitions of SEP. Finally, severity of the problems is one of the most important predictors of service use [38, 43, 70, 71]. Most studies that use questionnaires to measure emotional and behavioural problems, suggest that total symptom scores and impairment ratings are robust predictors of mental health care use [38].

Describing mental health care use and its determinants is especially important in the group of the youngest school-aged children. For these children a major milestone takes place; the transition from pre-school to elementary school. Children must accommodate to daily schedules, new adult authority, peers and academic challenges through which emotional and behavioural problems can become apparent [72]. To detect such problems in this age group, both parent and

teacher report of problems are important, since inter-rater differences in level of problems are reported frequently [73, 74]. These differences may have a significant impact on the identification and treatment of mental health problems in children [73]. Inter-rater differences can reflect both perceptual bias [75], or true differences in the problem behaviour of children across settings [76]. In the Netherlands, signalling for emotional and behavioural problems is part of the preventive care system and is based on both parent and teacher report. Although signalling is frequently conducted in the youngest school-aged children, exact numbers on mental health care use after signalling are still lacking.

Hence, the main aim of this study was to describe specialist mental health care use in children of 5-8 years old with high scores for emotional and behavioural problems and to examine whether SEP and ethnicity were related to the likelihood of receiving mental health care. In a group of 1,269 children, with a high score (>P90) on the Strengths and Difficulties Questionnaire (SDQ) at age 5-6 years, we described service use during 24 months following signalling. The second goal of this study was to test whether both parental perceived severity of the problems and perceived severity by teachers are predictive of mental health care use.

METHODS

Subjects and setting

In the school year 2008-2009, from a total of 11,987 children enrolled in grade two (5-6 years old) of 94% of all mainstream elementary schools in the Rotterdam-Rijnmond area, the Strengths and Difficulties Questionnaire (SDQ) was completed for 10,951 (91%) children. Questionnaires were distributed through schools to parents and teachers for use as a signalling tool in the preventive child health care. In the Netherlands, the Dutch preventive care system is responsible for monitoring and safeguarding the development of all children, for example through identification of children with emotional and/or behavioural problems with signalling questionnaires, like the SDQ. After signalling problems, children can receive care through the child mental health care system. Child mental health care in the Netherlands comprises institutes for ambulatory mental health care, and psychiatric outpatient and inpatient clinics, which provide diagnostic assessment, treatment and assistance to children and their caregivers.

In total, for 8,114 (67%) children parents filled out the questionnaire and in total for 9,397 (80%) children teachers filled out the questionnaire. A total of 1,552 children had a high SDQ total difficulties score reported by parent, teacher or both. A high SDQ total score was defined as a score above the 90th percentile (>P90) in the total group of 10,951 children. The cut-off point was 14 for parents and 13 for teachers.

In the group of 1,552 children with a high SDQ score, parental consent for linkage was refused for 34 children (2%) and 248 children (16%) could not be linked to the Psychiatric Case Register (PCR) for various reasons, among which: the SDQ was completed after the start of the followup period, children moved outside the Rotterdam-Rijnmond area, or children missed required identifiers for the linkage. In total, data on mental health care use was available for 1,269 children (82% of the target population). Non-response was higher among female children (p=0.004), among children living in a family composition other than both biological parents (p=0.005), and among children with a low severity perception according to their parents (p<0.001) and teachers (p<0.001).

Informed consent was obtained from parents in the study population. This study was approved by the Medical Ethics Committee of the Erasmus University Medical Centre Rotterdam, the Netherlands. This study was conducted according to the Declaration of Helsinki code of ethics.

Measures

Problem behaviour and severity

The Strengths and Difficulties Questionnaire (SDQ) was used to obtain standardised reports of children's problem behaviour and problem severity, as reported by parents and teachers. The SDQ is a reliable and valid 25-item measure to identify 3-16-year-old children with emotional and behavioural problems [77-80]. The SDQ measures conduct problems, inattention-hyperactivity, emotional problems, peer problems and prosocial behaviour and impact of the problems. Goodman's impact supplement [81] starts with an item about perceived problems and if confirmed, it follows with items about distress, social impairment, burden and chronicity. The impact score ranges from 0-10 for parents and 0-6 for teachers. SDQ total score and SDQ impact score were used as separate indicators of severity. A high impact score was defined as having a score of two or higher on the impact questions.

Demographic variables

Socioeconomic position (SEP) of the parents and ethnicity of the child were included as predictors. Gender of the child and previous use of care were included as confounders. Indicators of SEP were parental level of education and average neighbourhood family income. The level of education of the parents was classified into three levels, ranging from I (low) to 3 (high). A low education was defined as no education at all, or only elementary school. A high education was defined as higher vocational education or university degree. Average neighbourhood family income (further referred to as family income), based on the six-digit postal code system as used in the Netherlands, was obtained from Statistics Netherlands (CBS, 2004). Family income was classified in three groups: low, middle and high. A low family income was defined as equal as or lower than the established minimum income in the Netherlands (<€1401 per month). A high family income was defined as equal as or higher than the established modal income in the Netherlands (>€ 2508 per month).

A child was classified as ethnic Dutch, Surinamese, Antillean, Turkish, Moroccan or other, based on the country of birth of the child and at least one of his/her parents [55]. If the country of birth of one of the parents, or the child itself was outside the Netherlands, the child was classified as non-Dutch [55]. The children were divided in four groups: Dutch, Antillean/Surinamese (children from former colony migrants), Moroccan/Turkish (children from labour migrants) and children with other ethnicities. The largest ethnic minority groups living in the Netherlands migrated from Mediterranean countries, mainly Turkey and Morocco, as labour migrants since the 1960s and early 1970s. Surinamese and Antillean migrants came from South America and the Caribbean respectively, to the Netherlands during the process of decolonisation after 1975. The group containing other ethnicities is very diverse, since this group is comprised of, among others, labour migrants, refugees and knowledge migrants.

Use of mental health care

Most studies of mental health care in children use self-report of children and/or parents, which can be biased by recall problems or unwillingness to report referral. Therefore, in this study data on the use of mental health care services were obtained from the Psychiatric Case Register Rotterdam-Rijnmond. A psychiatric case register is a "patient-centred longitudinal record of contacts with a defined set of psychiatric services, originating from a defined population" [82]. This prevents patients from being counted more than once, while at the same time keeping track of all patient contacts over time. The Psychiatric Case Register Rotterdam-Rijnmond contains information on all mental health care services in the area: the Regional Institutes for Outpatient Mental Health Care, other outpatient services and clinics for psychiatric care, crisis intervention services, sheltered homes, day centres and (general) psychiatric hospitals. A negligible proportion of the children and adolescents in care in the Netherlands use other mental health services, e.g. mental health care programs provided by the private sector. In most cases these patients have consulted the public sector first [83].

The register data were linked to the children with high SDQ scores using the probabilistic linkage method [84], including the first two letters of the last name, date of birth, gender, country of birth, and partial postal code as identifiers. Anonymity of the subjects was adequately protected, since probabilistic record linkage is based on data that are not traceable to individual patients [84]. The case register provided information on the starting date of treatment. Information on both previous and new service use was obtained from the Psychiatric Case Register. Previous service use was defined as one or more contacts with the mental health care system before or during signalling problems with the SDQ. New service use was defined as at least one contact with a mental health care service in the follow-up period, after signalling. Use of mental health services was assessed for a follow-up period of 24 months after signalling. Mean length of the follow-up period was 696.6 days (SD: 121.2, range: 6.0-730.0). Mean age at the end of the follow-up was 7.7 years (SD: 0.6); 8% was 6 years old or younger, 64% was 7 years old, 27% was 8 years old and 1% was 9 years old.

Data analyses

Cox continuous-time proportional hazards models were used to test demographic and severity variables as predictors of mental health service use. "Survival time" was defined as the length of time (days) between completing the SDQ and the first contact with mental health services. All Cox regression analyses were adjusted for service use prior to signalling problems with the SDQ (previous service use). We applied a stepwise approach using likelihood-ratio tests to assess significant change in model deviance. Model fit was checked with observed versus expected plots assessing the proportional hazard assumption and by testing the correlation of Schoenfeld residuals for each predictor with survival time.

A significance level of <.05 was used for all analyses. To account for missing values we used multiple imputation based on twenty imputed data sets ('multiple imputation' procedure in SPSS 17.0). In the analyses on parent reports we only included children with parental response on the questionnaire and in the analyses on teacher reports we included only children with teacher response. The data were imputed only for general characteristics and socioeconomic indicators, but not for severity indicators and mental health care use. Statistical analyses were performed using Statistical Package of Social Sciences, version 17.0 for Windows (SPSS Inc, Chicago, IL, USA).

RESULTS

Table I shows the characteristics of the study population. Mean age of children at baseline was 5.3 (SD: 0.5) years and 64.2% of the children were male. Mean parent SDQ score was 14.3 (SD: 5.1) and mean teacher SDQ score was 12.3 (SD: 6.3). The minority of the children had a high impact score according to parents (20.7%), or according to teachers (31.1%). Most children in the study sample were Dutch (36.8%), had parents with a middle educational level (57.6%) and a middle income (43.6%).

In the study sample (n=1,269) 97 (7.6%) children received care before the initial signalling with the SDQ (previous care use). During the follow-up period, 117 (9.2%) children had newly entered the Psychiatric Case Register, indicating that they had at least one contact with mental health service in the region.

Table 2 shows the service use by ethnicity, SEP measures and severity, adjusted only for previous service use and child gender. Child ethnicity was significantly related to new mental health care use. Mental health care use was lower in non-Dutch children than in Dutch children: 7.4% in Antillean/Surinamese children, 3.4% in Moroccan/Turkish children, 5.5% in children with other ethnicity versus 16.2% in Dutch children (HR Antillean/Surinamese: 0.39, HR Moroccan/ Turkish: 0.18, HR other ethnicity: 0.30). Severity of the problems, in terms of total difficulties score and impact score, was related to a higher chance of service use (HR total score parents: 1.06, HR total score teachers: 1.05, HR impact score parents: 2.15 and HR impact score teachers: 1.85). Parental educational level and family income were not related to service use.

Table 3 shows the results of the multivariate Cox regression model. This model included child gender, previous care, child ethnicity, impact score parent, impact score teacher, total SDQ difficulties score of the parent report and total SDQ difficulties score of the teacher report. Inclusion of parental educational level, family income, and impact score of the parent SDQ and impact score of the teacher SDQ did not improve the model significantly. Child ethnicity was still significantly related to new service use. Mental health care use was lower in Moroccan/Turkish children and in children with other ethnicity than in Dutch children. Severity was related to a higher HR for service use for the total SDQ scores rated by parents and teachers.

Table 1. Characteristics of the study population (n=1,269)

	n	Percentage/mean (SD)
Gender of the child		
Female	454	35.8%
Male	815	64.2%
Ethnicity of the child		
Dutch	468	36.8%
Antillean/Surinamese	231	18.2%
Moroccan/Turkish	354	27.9%
Other	217	17.1%
Parental education level		
High	361	28.4%
Middle	731	57.6%
Low	176	13.9%
Family income		
Continuous		1842 (697)
High (above >€2508)	251	19.8%
Middle (€1401-€2508)	554	43.6%
Low (<€1401)	464	36.6%
Mean age of the child at start (SD)		5.3 (0.5)
Mean age of the child at end follow-up (SD)		7.6 (0.6)
Mean follow-up period (SD)		696.6 (121.2)
Parent report		
Total score (mean)		14.3 (5.1)
Low	286	29.5%
High	682	70.5%
Impact score		
Low	716	79.3%
High	187	20.7%
Teacher report		
Total score (mean)		12.3 (6.3)
Low	464	39.1%
High	722	60.9%
Impact score (mean)		1.2 (1.4)
Low	781	66.4%
High	395	31.1%
Service use in follow-up period	117	9.2%
Service before start follow-up	97	7.6%

Table 2. Hazard ratios between predictor variables and service use[†]

	% in care	HR	95% CI	p	β	SE
Gender of the child						
Female	4.6%	1.00				
Male	11.8%	2.68*	1.67-4.30	< 0.001	0.99	0.24
Ethnicity of the child						
Dutch	16.2%	1.00				
Antillean/Surinamese	7.4%	0.39*	0.22-0.69	0.001	-0.94	0.29
Moroccan/Turkish	3.4%	0.18*	0.10-0.33	< 0.001	-1.73	0.32
Other	5.5%	0.30*	0.16-0.56	< 0.001	-1.19	0.32
Parental education level						
High	7.5%	1.00				
Middle	10.5%	1.43	0.82-2.48	0.21	0.36	0.28
Low	7.4%	0.97	0.40-2.34	0.95	-0.03	0.45
Family income						
High (above >€2508)	11.1%	1.00				
Middle (€1401-€2508)	10.3%	0.93	0.58-1.50	0.77	-0.07	0.24
Low (<€1401)	6.9%	0.60	0.34-1.06	0.08	-0.51	0.29
Parent report						
Total score (continuous)	NA	1.06*	1.01-1.10	0.009	0.06	0.02
Impact score						
Low	8.9%	1.00				
High	15.5%	2.15*	1.39-3.34	0.001	0.77	0.22
Teacher report						
Total score (continuous)	NA	1.05*	1.01-1.08	0.005	0.04	0.02
Impact score						
Low	7.4%	1.00				
High	12.4%	1.85*	1.27-2.71	0.001	0.62	0.19

^{†:} all associations are corrected for previous service use

Table 3. Hazard ratios for ethnicity, problem severity and service use corrected for gender and previous care use

	HR	95% CI	p	β	SE
Model 1 [†] (n=899)					
Gender of the child					
Female	1.00				
Male	2.08*	1.29-3.35	0.004	0.73	0.26
Ethnicity of the child					
Dutch	1.00				
Antillean/Surinamese	0.67	0.37-1.20	0.18	-0.40	0.30
Moroccan/Turkish	0.25*	0.12-0.49	< 0.001	-1.41	0.40
Other	0.31*	0.15-0.66	0.002	-1.16	0.38

^{*:} significant at p<0.05

Table 3. Hazard ratios for ethnicity, problem severity and service use corrected for gender and previous care use (table continued)

	HR	95% CI	р	β	SE
Parent report				,	
Total score	1.04	1.00-2.31	0.07	0.04	0.02
Impact score					
Low	1.00				
High	1.50	0.97-2.31	0.11	0.40	0.25
Model $2^{\dagger\dagger}$ (n=1088)					
Gender of the child					
Female	1.00				
Male	2.45*	1.47-4.08	0.001	0.90	0.26
Ethnicity of the child					
Dutch	1.00				
Antillean/Surinamese	0.35*	0.19-0.68	0.002	-1.04	0.33
Moroccan/Turkish	0.19*	0.10-0.36	< 0.001	-1.68	0.33
Other	0.30*	0.16-0.58	< 0.001	-1.21	0.34
Teacher report					
Total score	1.03	0.99-1.07	0.11	0.03	0.02
Impact score					
Low	1.00				
High	1.58*	1.01-2.46	0.04	0.46	0.23
Model $3^{\dagger\dagger\dagger}$ (n=811)					
Gender of the child					
Female	1.00				
Male	1.84*	1.08-3.13	0.03	0.61	0.28
Ethnicity of the child					
Dutch	1.00				
Antillean/Surinamese	0.62	0.34-1.14	0.13	-0.49	0.31
Moroccan/Turkish	0.26*	0.13-0.54	< 0.001	-1.33	0.36
Other	0.26*	0.12-0.58	0.001	-1.34	0.41
Parent report					
Total score	1.08*	1.02-1.13	0.004	0.07	0.03
Impact score					
Low	1.00				
High	1.17	0.87-1.55	0.60	0.15	0.29
Teacher report					
Total score	1.06*	1.04-1.08	0.004	0.06	0.02
Impact score					
Low	1.00				
High	1.64	1.00-2.70	0.07	0.50	0.28

^{†:} Analyses corrected for: gender of the child, previous care, ethnicity of the child, impact score parent, total difficulties score parent report

^{††:} Analyses corrected for: gender of the child, previous care, ethnicity of the child, impact score teacher, total difficulties score teacher report

^{†††:} Analyses corrected for: gender of the child, previous care, ethnicity of the child, impact score parent, impact score teacher, total difficulties score parent report, total difficulties score teacher report

^{*:} significant at p<0.05

DISCUSSION

To our knowledge, this study is the first to provide estimates of specialist mental health care use in a population of the youngest school-aged children, after signalling for emotional and behavioural problems through parents and teachers. Overall, the data showed that 9.2% of children with emotional and behavioural problems receive specialist mental health care within 24 months after signalling and that ethnic minority children are underrepresented in this group. It should be emphasised, however, that the results concern numbers of children with high SDQ scores that receive specialist mental health care and do not reflect the total rates of any service use throughout the general population.

Role of ethnicity

The lower service use in Moroccan and Turkish children and in children from other ethnicities was not related to a lower socioeconomic position or to ethnic variations in the severity of the problems, whereas the lower service use in Antillean and Surinamese children was. It is possible that the migration history of these groups plays a role in these differences. Familiarity with the Dutch way of monitoring and organising care for children may vary with migration factors. For example, Moroccan and Turkish migrants (parents) have had a wider bridge to gap in terms of mastering Dutch language than migrants from former colonies. Besides migration factors, cultural factors may explain ethnic differences in service use. A plausible cultural factor is ethnic differences in care preferences, since there are indications that more ethnic differences in care use exists in specialist care, than in primary care [85]. For example, parents of ethnic minority children may prefer care outside the mental health care system, such as care provided by school or informal care, to solve the problems of their child. Such care preferences may be linked to ethnic differences in parents' attitudes about mental health care services, since these attitudes are associated with whether and which care children receive [86]. Research has suggested that ethnic minority groups have less positive expectations about child mental health services [87].

Furthermore, a clearer understanding is required about barriers to service use. Potential barriers can be structural constraints (e.g. lack of availability of providers, long waiting lists), barriers related to perceptions about mental health problems (e.g. parents' and/or teachers' inability to identify children's need for specialist care) and barriers related to perceptions about mental health care services (e.g. lack of trust in mental health care providers). These barriers can be more prevalent in certain ethnic groups than in others, and so lead to differences in service use. Whereas one study showed that all three types of aforementioned barriers to mental health care were relatively common among poor urban African-American families in the United States [88], research in other ethnic groups and in other geographic areas is still scarce. More information about the role of barriers to service use in different ethnic groups can aid the development of interventions that address these (potential) barriers. It is important to know which of the suggested barriers are actually perceived as barriers, or act as barriers to service use for young children.

Role of perceived severity

Perceived severity of the problems according to parent and teacher, were both related to the child receiving specialist mental health care. This extends earlier findings which show that severity of the symptoms perceived by parents, and to a lesser extent by teachers is strongly associated with service use [37, 45, 89, 90]. Interestingly, we showed that the SDQ total score reported by both teachers and parents was related with service use, whereas teacher-reported severity in terms of impact score predicted service use in children stronger than parent-reported impact. Cohen et al. (1991) reported that teachers were the professionals with whom parents most commonly discuss the problems of their child [90] and that thereby teachers can play an important role in initiating children's use of mental health services. Moreover, the Great Smoky Mountains study showed that the education sector was the most common point of entry into mental health care [91]. The association between teacher-reported severity and service use we found in our study was, therefore, not entirely unexpected. This association can be important in the light of low problem perception in parents. The majority of parents of children with high problem scores for emotional and/or behavioural problems, especially ethnic minority parents, do not perceive problems [92], whereas problem perception is an important predictor of service use [44, 93]. In contrast, teachers' problem perception was much higher than that of parents, and was not related to ethnic background in the same population of young school-aged children [92]. Therefore, teachers' perception of severity of the problems can be important for identifying children that need (professional) care.

The role of teachers in helping children with emotional and behavioural problems should not be limited to detecting problems and initiating specialist care, however. Teachers can also play an important role in facilitating adequate care through school, especially for children with minor problems that do not require specialist care. Although the threshold to use mental health care for young children has lowered, many parents still prefer to seek help within a familiar context for their children; teachers, nurses and school psychologists [94]. This could be one of the reasons why approximately 90% of the children in our study did not receive specialist care. Therefore, more attention should be paid to the possibilities of school-based care and to the training of teachers to enhance their ability to identify and act upon emotional and behavioural problems in young school-aged children. School care can offer parents a low, informal way of dealing with the problems of their child. Furthermore, school care could mitigate the need for future (specialist) intervention.

Role of socioeconomic differences

Our findings of a lack of socioeconomic differences related to mental health service use are interesting. Mental health care services in the Netherlands seem to be accessible at every socioeconomic level. The results of studies in other European countries with well-developed and easily accessible social and health services are similar to those of the present study [65, 94]. However, the absence of socioeconomic inequalities in service use cannot be generalised to other countries. Different conclusions are likely to be found in countries where the health care system is organised differently, or in countries where socioeconomic inequalities are larger than in the Netherlands.

Mental health care use in young children

The interest in early detection of emotional and behavioural problems has increased [56], since several studies have demonstrated the stability of problem behaviour from childhood to adolescence as well as into adulthood [12, 14]. Data collected in studies like this study are sometimes used by those lobbying for services for children [29]. Such mandates are mainly based on the claim that child health care professionals under-identify children with mental health care problems, in particular in ethnic minorities [95]. Indeed, only a small part of the screened-positive children received specialist care and we found lower service use in ethnic minority children than in ethnic majority children. However, we must keep in mind that the use of precise numerical estimates of rates of service contact to determine service need can obscure the fact that not all parents perceive emotional and behavioural problems in their child as a problem for which treatment is needed. A low service use in this group is not a good estimation of unmet need for care, as perceived need for care in this study is 23% by parents and 48% by teachers [92]. There will be a substantial group of children left that does not need specialist care. No care or less specialised care may be more appropriate, and sometimes preferred by parents. Therefore, we should focus on the role of other sources of care as well, since it seems unlikely and undesirable that specialised mental health care can provide care to every child [29].

Limitations

For the interpretation of our results, we must take into consideration several limitations. First, the follow-up period of 24 months could be too short to detect all children that received specialist care after signalling. Ethnic minority children may enter treatment with a greater delay than ethnic majority children, whereby we missed them. A study by Laitinen-Krispijn and colleagues (1997) showed that the predictive power of most forms of problem behaviour on service use was as high directly after signalling as it was 5 years later [65]. Their study showed a remarkable delay between the awareness of these problems in parents and their (adolescent) children and actually receiving care. Longitudinal research is needed to examine the processes for different ethnic groups of entry into and on-going contact with specialist services. Second, the Psychiatric Case Register does not provide information on alternative sources of care outside the specialist mental health system, such as care provided by schools, general practitioners and youth welfare. The case register does not include psychiatric services provided by the private sector, either. However, the exclusion of private psychiatry or psychotherapy practices is unlikely to affect our conclusions because in the Netherlands these services form only a relatively small part of the outpatient mental health care. Third, we used the SDQ to assess emotional and behavioural problems. A high SDQ score (>P90) only indicates a possible need for care, since the SDQ discerns a spectrum of emotional and behavioural problems in children, including minor problems that do not require specialist care. The cut-off of >P90 includes both subclinical and clinical levels of problem behaviour. Finally, there was selective non-response, but the effect-sizes were small.

CONCLUSION

Already in the youngest school-aged children (5-8 years old), ethnic differences in the use of specialist mental health care are present. These differences could not be explained by ethnic variations in socioeconomic position or in parental perceived severity. Future research should explore other underlying mechanisms that can explain the ethnic differences and investigate if the lower specialist care use in ethnic minority groups is linked to an unmet need for care. Further, since perceived severity by teachers was an important predictor of health care use, teachers may be especially helpful in advising child health professionals in the process of identifying children that need (professional) care.

Chapter 3

An overestimate of unmet need for care?

A contribution to the debate on care use in children with problem behaviour

Submitted for publication

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ABSTRACT

Background

The general consensus in research is that many children with problem behaviour experience an unmet need for professional care, since few children are using specialist mental health care for their problems. On the other hand, a recent public discussion about over-diagnosing emotional and behavioural problems in children and unnecessary specialist mental health care use for these problems has found its way into empirical research. What hampers the quality of the debate is a lack of insight into the actual numbers describing care use and into the need for professional care of children with problem behaviour. In this study, we give a detailed description of care use and need for care in a Dutch preventive care setting.

Methods

In school year 2008-2009, 869 out of a total of 9,397 children (5-6 years old) had a high score on the Strengths and Difficulties Questionnaire (SDQ) according to their teachers. For 353 of these children (study sample) the SDQ, as well as questions about care use and need for professional care, were completed again by teachers 18-24 months later. Referral and care use in this period were described using four different sources (Psychiatric Case Register information, records from the registry of Youth Health Care Services, records from preventive care and the teacher follow-up questionnaire).

Results

71% of the study sample received any formal support and 47% used professional care before or after signalling emotional and behavioural problems by teachers. Both care use and no care use co-occurred with a decrease of problems two years after problems were reported. In those children where teachers reported a need for care at both time points, 92% had received professional care or other formal support, suggesting little unmet need for professional care.

Conclusions

To have a high quality debate about unmet need for professional care and the under- or overdiagnosis of problem behaviour in young children, we need studies that describe care use as broad as possible, comprising measures of perceived need for care and numbers of mental health care use as well as numbers on other forms of support and services.

INTRODUCTION

Epidemiological research consistently reports ranges of 3% to 26% of children suffering from emotional and/or behavioural problems [29, 96]. The general consensus is that early detection and treatment of these problems in childhood leads to benefits regarding development, wellbeing and health [1-3]. However, across countries, only 20-40% of children with clinical symptom levels have contact with any specialist mental health care service [29, 37]. Therefore, most studies conclude that an unmet need for care exists among these children [29, 39]. The outcome of studies into unmet need for care depends heavily on the definition of unmet need for care that is used. Unmet need for care in these studies is typically defined as the presence of symptoms, sometimes in combination with impairment, without a concurrent report on specialist mental health care utilisation [97, 98]. However, these studies do not take into account that, while emotional and behavioural problems may exist, there might not exist a need for care, and that while a need for care exists, there might not be a need for *specialist* mental health care.

The definition of unmet need for care that is currently used in most studies could lead to an overestimation of the amount of children with an actual unmet need for care, for two reasons. First, this definition implies a direct relationship between problem behaviour and needing care. However, not all children with problem behaviour have a need for care. Most studies do not take into account the value judgments of parents, teachers and/or professionals about whether the perceived problem of the child is severe enough to warrant professional care [29, 97]. One of the few studies that combined measures of subjective need with measures of problem behaviour, showed that in only 48% of children with high scores (>P90) on the Strengths and Difficulties Questionnaire (SDQ) according to teacher report, teachers reported a perceived need for professional care [92]. When this perceived need for care is not taken into account, a group of children with no actual need for care may be misrepresented as having unmet need for care. Second, most studies base unmet need for care in children with emotional and behavioural problems solely on low rates of specialist professional mental health care use in these children, i.e. care used through the mental health care system. Other, 'non-specialist' professional services, for example educational support services, are often not taken into account. Yet, 'non-specialist' professional services are the most commonly used for problem behaviour in school-aged children [70, 99] and are in many cases preferred by care-givers over specialist mental health services [100]. So, the most common definition of unmet need for care defines 'unmet need' too broadly and 'care' too restrictively, and could therefore lead to a misrepresentation of the size of the group of children with an actual unmet need for care.

In contrast to the unmet need for professional care and the underutilisation of mental health care that is reported in most research papers, concern about an 'epidemic' of diagnosed emotional and behavioural problems in children worldwide, has recently found expression in some academic journals [101-103] as well as in popular press and media [104, 105]. In the Netherlands, for example, there is a growing public concern about 'over-diagnosis' of problems and the unnecessary or premature use of professional care and medication for these problems. Furthermore, there is an ongoing political debate about limiting the growing costs of specialist care, special education and social programs and services for children with emotional and behavioural problems [106].

Indeed, an increase in specialist mental health care use [94, 107] and in medication use, especially for ADHD-related problems, has been reported over the last decades [108, 109], whereas the overall rates of children's problems have not increased during the period 1989-1999 [94, 110-112]. So, whereas unmet need is frequently reported in empirical research and researchers call for action to get more children to receive specialist care, the public debate is focused on eliminating the perceived over-use of specialist mental health care. In spite of attracting more and more public and scholarly interest, these discussions about (un)met need for professional care for emotional and behavioural problems in young children are but little substantiated by empirical studies that describe the full spectrum of care use in young children in combination with measures of perceived need for care. Only using such a definition of unmet need for care can lead to a satisfying answer to the question whether all children with emotional and behavioural problems, who display a need for care, receive support that is concurrent with their needs.

In this paper we want to contribute to the discussion by describing referral and care use as broadly as possible in a group of 5-6-year-old children after signalling for emotional and/or behavioural problems in a preventive care setting. 353 children with a high score (>P90) on the Strengths and Difficulties Questionnaire (SDQ) according to teacher-report were followed for 24 months. Referral and care use were described using four different sources (Psychiatric Case Register information, records from the registry of Youth Health Care Services, records from preventive care and a teacher follow-up questionnaire). Besides describing care use, we explored the association between total SDQ scores and care use over time and we compared teachers' problem perception and perceived need for professional care with the actual care use in children before and after signalling problems. In this way, we can describe how many children, for whom their teacher reported emotional and behavioural problems and a corresponding need for care, received specialist mental health care or other support. We will illustrate that the quantification of unmet need strongly depends on the definition of unmet need for care, both in qualifying whether there is a need, and in qualifying whether the need is met.

METHODS

Setting and subjects

In the Netherlands, preventive mental health care screening is used to identify children with emotional and behavioural problems and, if necessary, to assure that they receive adequate care for their problems. The first screening moment in school-aged children is at elementary school (grade 2), when children are 5-6 years old. All parents of children in grade 2 of the elementary school are invited for a routine health assessment of their child by a child health professional (CHP). During the health assessment the CHP discusses with the parents the psychosocial wellbeing of the child. In Rotterdam, before the assessment parents as well as teachers were asked to complete the Strengths and Difficulties Questionnaire (SDQ), which is used in the Dutch preventive care setting as a signalling instrument [77, 78]. During the routine health assessment the CHP can give parents of children with emotional and behavioural problems advice or reassurance, or the CHP can refer children with problems and their parents to preventive care (for

example to enhance parenting skills), to specialised youth care or family support services or child protective services, to specialist mental health care or to other sources of care (e.g. care provided by school). The preventive care system is not the only source of referral for children with problem behaviour, the main other source in the Netherlands is the general practitioner.

In the school year 2008-2009, from a total of 11,987 children enrolled in grade two (5-6 years old) of 94% of all mainstream elementary schools in the Rotterdam-Rijnmond area, 10,951 (91%) children were screened with the SDQ. In total, for 9,397 (78%) children teachers filled out the questionnaire before the preventive health assessment (T1). For this study we aimed to select the children with the upper 10% SDQ scores (>P90). This cut-off reflects children with both clinical and subclinical levels of problem behaviour [113]. As no norm data for teachers were available for this age group, the >P90 cut-off point was based on British and American norm data, Dutch norm data for 7-12-year-old children and on a pilot study among children eligible for the preventive health assessment in grade 2 at elementary school in the Rotterdam-Rijnmond area (n=145). In this pilot study the >P90 cut-off point for teacher report was 13. Children scoring above this point were subsequently followed for 18-24 months. In the final sample (n=9,397) the cut-off of 13 corresponded with the 90.8th percentile, as a total of 863 (9.2%) children had a high SDQ total difficulties score reported by their teacher. In this study we only included children who had a high score on the SDQ according to teacher report at T1 (school year 2008-2009) and for whom an (often different) teacher completed the follow-up questionnaire 18-24 months later at T2 (total n=353).

The group of children with high SDQ scores with information only at T1 (n=510) and that with information on both T1 and T2 (n=353) did not differ significantly from each other on the measures used in this study, except for teachers' perceived need, teachers' mean impact score and the use of school care networks. Children with both T1 and T2 information had a significantly lower perceived need at T1 (56% versus 63%, $\chi^2(1)$ = 4.1, p=0.04), a lower impact score at T1 (1.9 (SD: 1.6) versus 1.6 (SD: 1.4), F (1,855)= 9.5, p=0.002) and were less often involved in a school care network at T_I (43% versus 52%, χ^2 (I)= 7.I, p=0.008) than children with only T_I information.

The study protocol was approved by the Medical-Ethics Committee of the Erasmus Medical Centre of Rotterdam. All parents of the children included in the study gave informed consent for the use of record- and register information.

Measures

Emotional and behavioural problems

Emotional and behavioural problems were assessed using the teacher form of the Strengths and Difficulties Questionnaire (SDQ) at T1 and T2. The SDQ is a reliable and valid 25-item signalling measure to identify 3-16-year-old children with emotional and behavioural problems [78-81]. The SDQ measures conduct problems, inattention-hyperactivity, emotional problems, peer problems and prosocial behaviour. The teacher form of the SDQ measures the impact of the problems with 6 impact questions [81], of which the first: 'Do you think the child has a problem on one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?', was used to define teachers' problem perception. This question was scored on a 4-point

scale, ranging from (1) no problems to (4) yes, severe problems. The answers were recoded as yes (little to severe problems) or no (no problems). SDQ total score was used as indicator of severity in this study. A non-SDQ question was used to measure perceived need for professional care: 'Do you think the child needs professional help in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question could be answered with yes or no. Problem perception and perceived need for professional care were compared with reports of care use and were used as indicators of an (un)met need for care.

Care use after signalling

To describe care use after signalling in this sample we used information from four different sources: a follow-up questionnaire, preventive care Electronic Child Records (ECR), records from the registry of Youth Care Services and the Psychiatric Case Register Rotterdam-Rijnmond (PCR). We used two questions in the follow-up questionnaire to assess care use in school: 1. 'Is this child involved in a school care network for emotional and/or behavioural problems?' and 2. 'Has the child used care through school in the previous 18 months for emotional and/or behavioural problems?'. Both questions could be answered yes or no. A school care network is a multidisciplinary team of professionals involved in monitoring children with problem behaviour in elementary school and in taking decisions about service use for these children. The arrangement of a school care network may differ by school. In most schools, however, the network consists at least of the child's teacher, an internal support teacher, a CHP working in preventive care and a professional of Youth Care. Children who are monitored by a school care network do not necessarily receive evaluation and treatment for emotional and behavioural problems; some of them are only monitored in order to quickly proceed to action when necessary. In 2010, 71% of all elementary schools in the Netherlands had a school care network [114]. Care offered through school for children with emotional and behavioural problems may also differ by school. Examples of care offered by school are: extra support for the child from the teacher or from the special education needs coordinator, remedial teaching or support from a social worker or a school psychologist.

We obtained information about referral decisions by a CHP after the routine health assessment from the ECR. The ECR are digital medical records used in the Dutch preventive care system to monitor the development of children from birth to 19 years old. In this study, referral was defined as a new appointment with the CHP after the routine health assessment for more in-depth diagnostic assessment or counselling for the emotional and/or behavioural problems, and/or referral of the child for these problems. Advice was defined as information given by the CHP to parents about referral for emotional and/or behavioural problems, not including actual referral. No information about care use after referral and advice was available through the ECR.

We obtained information on further assessment for emotional and behavioural problems from the registry of Youth Care Services (further referred to as Youth Care). Youth Care is an organisation, financed by the Dutch government, which can refer children (from birth to 18 years old) with (severe) emotional and behavioural problems to specialist youth and family care and to specialist mental health care. The legal tasks of Youth Care are assessment of and referral for emotional and behavioural problems in children, coordinating the anti-child abuse services and to carry out legal case evaluation and youth rehabilitation. We obtained information about assessments carried out by Youth Care in the follow-up period of 18 to 24 months after signalling.

We obtained information about specialised mental health care use from the Psychiatric Case Register Rotterdam-Rijnmond. A psychiatric case register is a "patient-centred longitudinal record of contacts with a defined set of psychiatric services, originating from a defined population" [83, 84]. New service use was defined as at least one contact with a child mental health care service in the follow-up period of 18 to 24 months after signalling.

Definitions of total care use and formal support

In this paper, we made a distinction between total care use before signalling problems, total care use after signalling referral of the child, advice given by a CHP, formal support before and/or after signalling. Table 1 shows which sources were available to describe care use, referral, advice and formal support at baseline and follow-up.

Table 1. Overview of data sources used to define the different conce	epts describing care use in this study
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Definition	Youth Care T1	Youth Care T2	ECR T1	ECR T2	PCR T1	PCR T2	School Care* T2	School care network T1	School care network T2
Referral CHP				x					
Advice CHP				x					
Care use before T1	x		x		x			x	
Care use after T1		x		x		x	x		x
Formal support	x	x	x	x	x	x	x	x	x

^{*:} as reported by teacher

ECR: Electronic Child Records, PCR: Psychiatric Case Register Rotterdam-Rijnmond

Total care use before signalling problems (T1) was defined as care received for emotional and behavioural problems according to the ECR and/or care received according to the PCR and/ or assessment according to Youth Care, from birth until signalling. At T1 we only had information about the involvement of the child in a school care network, not about care used through school. Total care use after signalling (T2) was defined as care used by the child for emotional and behavioural problems in school and/or an assessment with Youth Care and/or care received according to the PCR in the period of 18-24 months after signalling. Referral and advice given by a CHP during the health assessment (obtained from the ECR) were only used to describe how many children received care via the signalling system of preventive care. Formal support was defined as total care use (as described above at T1 and/or at T2 and/or the involvement of the child in a school care network at T1 and/or T2. Formal support is an indicator of the child being 'in the picture' of caregivers; it includes care, support and monitoring.

Other measures

Other measures comprised the child's gender, ethnicity and average family income. A child was classified as ethnic Dutch, Surinamese, Antillean, Turkish, Moroccan or other, based on the country of birth of the child or at least one of his/her parents [55]. If the country of birth of one of the parents or of the child itself was outside the Netherlands, the child was classified as non-Dutch [55]. The largest ethnic minority groups living in the Netherlands migrated from Mediterranean countries, mainly Turkey and Morocco, as labour migrants since the 1960s and early 1970s. Surinamese and Antillean migrants came, from South America and the Caribbean respectively, to the Netherlands during the process of decolonisation after 1975. The group containing other ethnicities is very diverse; it comprises among others labour migrants, refugees and knowledge migrants.

Average family income, based on the six-digit postal code system as used in the Netherlands, was obtained from Statistics Netherlands (CBS, 2004).

Analyses

Descriptions are given of care use, referral and formal support. Differences in mean SDQ total score between time-points were analysed by paired sample T-tests. Differences between groups which were selected on the basis of their respective patterns of care use at T1 and T2 were analysed using a 4 x 2 repeated measures ANOVA with group (A (care received at T1 and T2, B (care received only at T1),C (care received only at T2 and D (no care received) as between subjects factor, and total SDQ score at T1 and total SDQ score at T2 as within subjects factor. Post hoc Bonferroni corrected pairwise follow-up tests were employed if appropriate. For all analyses, the 0.05 level of significance was employed.

RESULTS

Table 2 shows the characteristics of the study population at T1 and T2. Mean age at T1 was 5.3 (SD: 0.5) and mean age at T2 was 7.7 (SD: 0.6). 69.6% of the study population was male and 36.6% was Dutch. Mean family income was 1785.4 euro (SD: 530.8). Mean SDQ total score was 4 points lower at T2 compared to T1 (T(345)=10.7, p<0.001). On the average SDQ score at T2 was below the P90 level of T1 (mean SDQ total score T2=12.4, SD: 6.7).

Pathways in care: underuse of services?

Figure 1 gives an overview of the pathways in care after signalling. The source in which care use was registered is given in italics. At T1, before signalling, 19.3% of the 353 children with subclinical SDQ levels (n=68) received care for emotional and behavioural problems. At T1, 285 children received no care for their emotional and behavioural problems, but 103 (36.1%) of these children were already monitored by school networks. In total, 171 children (48.4%) received formal support (i.e. had used care and/or were monitored by school networks) at T1 before signalling.

Table 2. Characteristics of the study population at T1 and T2 (n=353)

General characteristics	T1	T2
Gender (%)		
- Boy	69.6	
- Girl	30.4	
Ethnicity (%)		
- Dutch	36.6	
- Surinamese	11.8	
- Antillean	8.6	
- Turkish	13.1	
- Moroccan	12.7	
- Other	17.2	
Mean family income (SD)	1785.35 (530.8)	
Mean age (SD)	5.3 (0.5)	7.7 (0.6)
Severity indicators		
Problem perception (%)	89.7	75.8
Perceived need (%)	54.1	47.7
Mean SDQ total score (SD)	16.4 (3.5)	12.4 (6.7)
>P90 (%)	100.0	46.8
Care use (%)		
Involved in school care network	42.8	34.6
Total care use	19.3	30.9

At T2, 41.6% (n=147) of the 353 children with (sub)clinical SDQ levels received care, of which 53.7% (n=79) were new cases (not receiving care at T1). Most children at T2 received care through school (80%), assessed by teacher report. In total, in the study sample of 353 children, 243 (68.8%) children had received formal support at T1 and/or at T2 and 110 children (31.2%) had not received any form of formal support by T2.

Figure 1 further shows that of those who receive professional care after signalling, for 25.3% (n=20) the routine health assessment played a role. At the routine health assessment, 11.9% (n=34) of the children were referred and 3.9% (n=11) received advice. The figure further shows little overlap between sources in which care use was registered.

Severity of the problems: unmet need for care?

Figure 2 and Table 3 show the association between SDQ total score and total care use at TI and T2. Four groups were distinguished: children who received care at T1 and at T2 (group A), children who received care only at T1 (group B), children who received care only at T2 (group

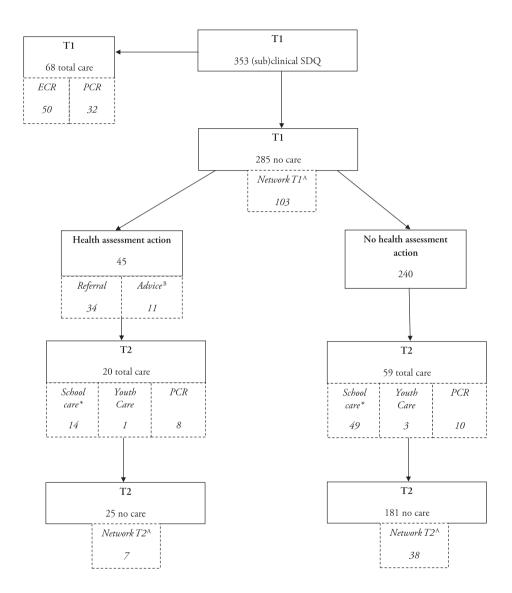


Figure 1. Pathways in care

ECR: Electronic Child Records, PCR: Psychiatric Case Register

^{*}According to teacher report

A: Involved in school care network, not receiving care

B: Received advice, no referral

C) and children who received no care at all (group D). All groups showed a significant decline in SDQ scores between T1 and T2 (F (1,349)=75.1, p<0.001). The differences in decline in SDQ scores between T1 and T2 were not significant.

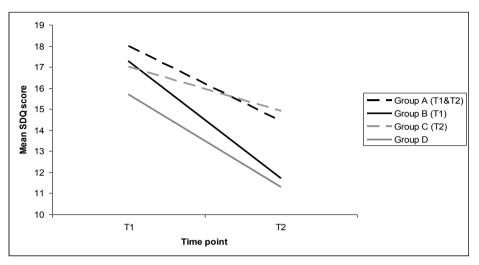


Figure 2. Associations between SDQ total score and total care use (T1/T2)

Group A: Care received at T1 and T2

Group B: Care received at T1, not at T2

Group C: Care received at T2, not at T1

Group D: No care received

Table 3. Associations between care use and SDQ score over time

Group	SDQ mean score T1 (SD)	SDQ mean score T2 (SD)	SDQ mean change T1-T2 (SD)
A (care T1 & T2)	18.0 (4.2)	14.4 (5.3)	-3.6 (6.2)
B (care T1)	17.3 (4.3)	11.7 (6.4)	-5.6 (6.8)
C (care T2)	17.0 (3.9)	14.9 (7.4)	-2.1 (7.6)
D (no care)	15.7 (2.9)	11.3 (6.3)	-4.4 (6.6)

Table 4 shows the percentages of children that used care respective to different definitions of care and different definitions of need for care. Teachers had a high problem perception (89.2%) at T1 and a lower problem perception at T2 (74.2%). Perceived need for care was 54.1% at T1 and 47.6% at T2. Regardless of problem perception and perceived need for care, total care use (before and/or after signalling problems) was 46.5% and 70.5% of the children received formal support. In the group of children for whom teachers reported a problem perception at both T1 and T2, total care use was 52.1% and 78.4% received formal support. In the group of children of whom teachers had a perceived need at both T1 and T2, total care use was 65% and 92.2% received formal support.

	n (%)	Care before signalling (%)	Care after signalling (%)	Total care (%)	Formal support (%)
PP T1	315 (89.2)	65 (20.6)	126 (40.0)	153 (48.6)	236 (74.9)
PP T2	262 (74.2)	53 (20.2)	114 (43.5)	133 (50.8)	197 (72.2)
PP T1 + PP T2	236 (66.8)	56 (21.2)	105 (44.5)	123 (52.1)	185 (78.4)
PN T1	191 (54.1)	54 (28.3)	89 (46.6)	109 (57.1)	167 (87.4)
PN T2	168 (47.6)	38 (22.6)	89 (53.0)	101 (60.1)	143 (85.1)
PN T1 + PN T2	103 (29.2)	31 (30.1)	59 (57.3)	67 (65.0)	95 (92.2)
All children	353 (100)	68 (19.3)	136 (38.5)	164 (46.5)	249 (70.5)

Table 4. Care use in children (%) respective to different definitions of care and need for care

PP: problem perception PN: perceived need for care

DISCUSSION

This study described care use in a population of 5-6-year-old children with emotional and behavioural problems according to teacher report. When care use was defined as broad as possible, comprising four different sources reporting on care use, 47% of the children had used care before or after signalling and 71% of the children had received formal support before or after signalling problems. Care use as well as no care use after signalling co-occurred with a decrease of problems two years after signalling. We showed that the amount of children experiencing unmet need for professional care is heavily dependent on the definition of 'unmet need' and the definition of 'care'. Unmet need appears to be large if one takes into account only children with emotional and behavioural problems that received specialist care (15%). However, unmet need for professional care is small, if one takes into account the children in whom the teacher reported a need for care at both time points; 92% of them received formal support before or after signalling.

The percentages on care use that we reported in our study concur with outcomes of the few studies that also compared several sources of service use. One Dutch study reported that 44% of children (4-II years old) with problem behaviour received care, in which mental health care and support from the teacher were included [99]. Further, one study among British school children with mental health problems reported that 57% received care during a 3-year follow-up period [115]. In this study care use was defined as service use through frontline services (teachers, primary health care and other non-mental health care services) as well as care used through specialist mental health services. Care use reported in these studies, as well as in our study, is much higher than generally reported in studies that only focus on specialist mental health care use [29, 37]. These studies overlook the growing role of care provided by other sources, for example care provided through the educational system. Our study showed that most children had used care for problem behaviour through school, or received formal support through a school care network. Future studies should strive at providing an overview of care use in young children that is as broad

as possible. Only then, more definite statements about the magnitude of unmet need for care in young children with emotional and behavioural problems can be made.

In our study, only 15% of children with high SDQ scores during the routine health assessment received care through specialist mental health services or Youth Care. This could imply a large unmet need for specialist mental health care. However, we must keep in mind that the SDQ is a signalling instrument and not a diagnostic assessment tool. This means that the SDQ identifies a broad range of psychosocial problems - including subclinical problems - many of which may not warrant specialist mental health care. Perhaps this is why for only 54% of the children with a high SDQ score at T1, teachers perceived a need for professional care. School care networks can monitor the children with mild problems and can provide a fast and appropriate response when problems get worse. Our study showed that more than 60% of children with problem behaviour are monitored by school networks. Thus, when using a broader definition of care use than in most studies, including educational services, we can conclude that more children with problem behaviour receive help than generally assumed.

In Europe, governmental policies strive to provide care for those who need it [116]. Our study showed that children with the highest level of problem behaviour already received care before signalling. In terms of perceived need for professional care reported by teacher, it is reassuring that 92% of children received formal support when perceived need was reported twice within 24 months. Therefore, it seems that our current service configuration is fairly effective in targeting and supporting children who are in the greatest need of care, at least in the group of children with problem behaviour identified by teachers. However, perceived need for care as reported by teachers should not be regarded as the 'golden standard' to determine if a child needs care. It is still possible that children with problem behaviour are classified by teachers as not needing care, while in fact other professionals working with the child or its parents do perceive a need for care. Therefore, we should investigate if an unmet need for professional care in this group is reported by parents and child health professionals as well.

The findings of this study are subject to limitations. First, descriptive studies in a selected population are always context dependent. For example, in the Rotterdam-Rijnmond area, children from ethnic minority groups are overrepresented. Earlier research has shown that children from ethnic minority groups receive less treatment for emotional and behavioural problems than ethnic majority children [32]. Reported care use in populations with more Dutch children may be higher. Our sample size was not powered to investigate ethnic variations. Second, we only included teacher report of problems and perceptions in our study. The study therefore describes unmet need according to teachers' perceptions of need and teachers' perceptions of the child's behaviour. Unfortunately, we only had information from parents at T1 [92]. An interesting further study would be a comparison with parents' perceptions. Third, we did not have information on care use other than registered in the ECR, PCR, records of Youth Care and the information provided by schools. The records and registers do not provide information on sources of care outside the mental health system, such as care provided by general practitioners, youth welfare and alternative care use. The PCR does not include psychiatric services provided by the private sector, either. However, the exclusion of private psychiatry or psychotherapy practices is unlikely to affect our conclusions, because in the Netherlands these services form only a relatively small

part of the outpatient mental health care. Furthermore, alternative care use that we may have missed in this way is probably limited as in-depth interviews with parents showed that parents did not consider alternative care use (like religious care) as a possible cure for their children's emotional and behavioural problems [117]. Fourth, children from whom we had no available information at T2 had a higher impact score, a higher perceived need for care as reported by teachers and were more often monitored by school care networks at T1. This may mean that care use is underestimated in our sample, since we missed some of the more severe cases, who we think are more likely to have used care. Last, it is unclear whether the formal support and monitoring as provided by school care networks is adequate to fulfill the need for care teachers have reported in the children with emotional and behavioural problems. Future studies should explore if children with problem behaviour that are 'only' monitored through school care networks do not experience unmet need for care.

CONCLUSION

The present study described care use and perceived need for professional care according to teacher report for the youngest school-aged children with emotional and behavioural problems. We showed that only few children received care through specialist mental health services, while a larger group of children received other types of formal support. When we restrictively define 'unmet need for care' as the discrepancy between specialist mental health care use and symptom levels, the reported level of unmet need for care is higher than when we include support given by other sources of care in the definition. Further, the value judgment of teachers can be a factor in determining the size of the group of children that experiences unmet need. In our study, unmet need for care was 31% when only taking into account children with problem behaviour that did not receive any care and/or formal support before or after signalling problems. However, unmet need for care was only 8% when we took perceived need of the teacher into account (at both time points). Thus, we should be cautious when establishing the definition of unmet need for care. By giving various options of how to define unmet need for care, our study contributes to a sensible debate on whether all children with emotional and behavioural problems actually receive support, and when they do, if the support is concurrent with their needs.

Chapter 4

Ethnic differences in problem perception and perceived need for care for young children with problem behaviour

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ABSTRACT

Background

Problem perception and perceived need for professional care are important determinants that can contribute to ethnic differences in the use of mental health care. Therefore, we studied ethnic differences in problem perception and perceived need for professional care in the parents and teachers of 5-6-year-old children from the general population who were selected for having emotional and behavioural problems.

Methods

A cross-sectional study with data of 10,951 children from grade two of the elementary schools in the Rotterdam-Rijnmond area, the Netherlands. Parents and teachers completed the Strengths and Difficulties Questionnaire (SDQ) as well as questions on problem perception and perceived need for care. The SDQ was used to identify children with emotional and behavioural problems. We included Dutch, Surinamese, Antillean, Moroccan and Turkish children in our sample with high (>P90) SDQ scores (n=1,215), who were not currently receiving professional care for their problems.

Results

Amongst children with high SDQ scores problem perception was lower in non-Dutch parents than in Dutch parents (49% vs. 81%, p<0.01). These lower rates of problem perception could not be explained by differences in socioeconomic position or severity of the problems. No ethnic differences were found in parental perceived need and in problem perception and perceived need reported by teachers. Higher levels of problem perception and perceived need were reported by teachers than by parents in all ethnic groups (PP: 87% vs. 63% and PN: 48% vs. 23%).

Conclusions

Child health professionals should be aware of ethnic variations in problem perception since low problem perception in parents of non-Dutch children may lead to miscommunication and unmet need for professional care for the child.

INTRODUCTION

Emotional and behavioural problems, if left untreated, often interfere with the everyday functioning of children and their families and are predictive of problems later in life [3]. The prevalence of emotional and behavioural problems as reported by parents and teachers in young children is high, and according to some studies these problems are reported even more frequently in children belonging to an ethnic minority than in children of the ethnic majority [25-27]. Furthermore, recent evidence suggests that children from an ethnic minority less often receive treatment for emotional and behavioural problems than ethnic majority children [30-32]. For example, lower rates of mental health services use were reported for Latino and African-American children than for White children in a cohort study of 7-14-year-old children in the United States [31]. In contrast, there is evidence that children from some ethnic minority groups have a mental health advantage and hence may have a lower need for professional mental health care [28]. To explain how ethnicity exactly influences the process of help-seeking, more insight is needed in ethnic differences in the determinants of help-seeking behaviour.

The 'Levels and Filters model' explains the relationship between different determinants of helpseeking behaviour on the one hand and actual help-seeking for mental health problems on the other [33-35, 37]. This model is refined by Verhulst and Koot (1992) and made applicable for the process of seeking help for children, mostly through their parents. Help-seeking is regarded as a stage-like process in which parents must move through different levels and filters before actually receiving help. The first filter in this model is problem recognition by the parents and their decision to consult a professional.

According to Logan and King (2001) several stages in parental problem recognition can be distinguished, among which: parents' initial acknowledgment of their child's distress and parents recognising that the problem is psychological and severe enough to merit professional attention [41]. These stages are comparable to the respective concepts problem perception and perceived need for professional care, as used in our study. In most previous studies problem recognition is measured as a high score on a signalling questionnaire or diagnostic interview [38], although this does not imply that parents also perceive the behaviour of their child as problematic and consider professional help. Zwaanswijk et al. (2006) found a large discrepancy between problem perception by parents when asked directly and problem behaviour as determined by a high problem score on a parent screening questionnaire. Less than half of the parents of 4-17-year-old children who reported child problems in the deviant range of the Child Behavior Checklist [42] had a corresponding problem perception [43]. Therefore, problem perception and perceived need for care should be studied as separate determinants of the process of help-seeking for children with mental health problems, besides measures of problem behaviour.

Ethnic differences in emotional and behavioural problems have been found in parent [25, 27] and teacher reports [32, 118]. Problem perception and perceived need for care may also differ between ethnic groups. For example, African-American parents reported less problem perception of ADHD-symptoms than ethnic majority parents of school-aged children [46]. Similarly, for adolescents European-American caregivers were more likely than minority parents to report problems [47]. Further, parents of 9-17-year-old children reported less need of mental health

care services in ethnic minority children than in majority children [48]. However, studies on ethnic differences in problem perception and perceived need for care in young children are scarce, especially studies that also include problem perception and perceived need of teachers. It is important to include parents' as well as teachers' perception of problems and need for care, as both are important predictors of referral and mental health care use in children [44, 45]. Further, besides inter-rater differences in level of problems [73, 74], inter-rater differences may also be present for problem perception and perceived need for professional care. Inter-rater differences can reflect both perceptual bias [75] or true differences in the problem behaviour of children across settings [76].

Hence, the first aim of this study was to examine ethnic differences in problem perception and perceived need for professional care in parents and teachers of young children. We studied this in a large group of 5-6-year-old children, with a high score on the Strengths and Difficulties Questionnaire (SDQ), belonging to one of the five largest ethnic groups in the Netherlands (from a Dutch, Moroccan, Turkish, Antillean or Surinamese society of origin). The largest ethnic minority groups living in the Netherlands migrated from Mediterranean countries, mainly Turkey and Morocco, as labour migrants since the 1960s and early 1970s. Surinamese and Antillean migrants came from South America and the Caribbean respectively, to the Netherlands during the process of decolonisation after 1975. We hypothesised that both parental problem perception and perceived need would be lower for non-Dutch children than for Dutch children, based on previous findings [46-48]. As ethnic differences in teachers' problem perception and perceived need for professional care have not been studied previously, we did not have any a-priori hypotheses about teachers. To take into account the context of the socioeconomic position of ethnic minorities, we investigated whether any ethnic differences may be explained by differences in socioeconomic position [38, 119].

METHODS

Sample

In the school year 2008-2009, from a total of 11,987 children enrolled in grade two (5-6 years old) of 94% of all mainstream elementary schools in the Rotterdam-Rijnmond area in the Netherlands, 10,951 children were screened. This area consists of both urban and rural communities, which allows generalisation of the results. Questionnaires were distributed through schools to parents and teachers for use as a signalling tool in the preventive child health care. The flowchart in Figure 1 shows the sampling process and the ethnic distribution for the group used in analyses.

In total, for 8,114 (68%) children parents and in total for 9,397 (78%) children teachers filled out the questionnaire. Non-response in parents was more likely when children were non-Dutch (38% non-response versus 14% in Dutch children, p<0.001). Non-response in teachers was more likely when children were Dutch (18% non-response versus 11% in non-Dutch children, p<0.001). Parental and teacher non-response were not related to sex or age of the child. Teacher non-response was also not related to parental level of education. We could not test the latter for parental response.

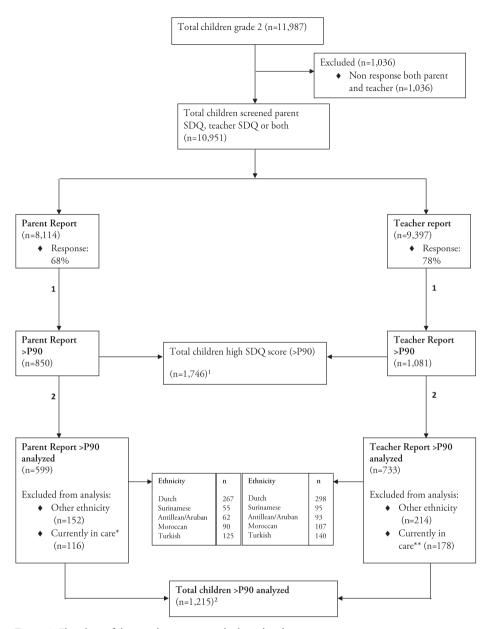


Figure 1. Flowchart of the sampling process and ethnic distribution

- 1: Only children with high SDQ scores (>P90) were included in the study sample
- 2: Children already in treatment for emotional and/or behavioural problems and/or children with 'other' ethnicity were excluded from the study sample
- 1: 185 both >P90 on parent- and teacher report
- 2: 117 both >P90 on parent- and teacher report
- * of whom 17 from other ethnicity
- ** of whom 44 from other ethnicity

A total of 1,746 children had a high SDQ score reported by parent, teacher or both. A high SDQ total score was defined as a score above the 90th percentile (P90) in the total group of 10,951 children. The same P90 cut-off points were used for all ethnic groups (non-ethnic specific cut-off points). The cut-off point for parents was 14 and for teachers 12. Children already in treatment for emotional and/or behavioural problems at the moment of signalling problems were excluded from the analyses, as well as children of another ethnic origin than Dutch, Surinamese, Antillean, Moroccan or Turkish (n=531) (see Figure 1). In total, we included 1,215 children with high SDQ scores in our analyses (Figure 1). The parent questionnaire was completed by the mother (71%), by both parents (12%), by father (7%) or by another caregiver (10%).

A child was classified as ethnic Dutch, Surinamese, Antillean, Moroccan or Turkish, based on the country of birth of the child and/or at least one of his/her parents. If the country of birth of at least one of the parents was outside the Netherlands, the child was classified as non-Dutch [55]. Of the children with a non-Dutch ethnicity, 87% was born in the Netherlands ('second generation residents of migrant descent'). The study protocol was approved by the Medical-Ethical Committee of the Erasmus Medical Centre of Rotterdam. All parents and teachers gave informed consent.

Measures

Parents and teachers completed the Dutch, Arabic or Turkish version of the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a reliable and valid 25-item signalling measure to identify 3-16-years-old children with emotional and behavioural problems [77, 78, 80]. The SDQ has five subscales: conduct problems, inattention-hyperactivity, emotional problems, peer problems and prosocial behaviour and an optional impact supplement. We used the first item of Goodman's impact supplement as measure for problem perception [81], and the following items about distress and social impairment to compute the impact score. The impact score ranges from 0-10 for parents and 0-6 for teachers. SDQ total score and SDQ impact score were used as indicators of severity.

To measure problem perception the first impact question of the SDQ was used: 'Do you think the child has a problem on one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question was scored on a 4-point scale, ranging from (1) no problems to (4) yes, severe problems. The item was recoded as yes (little to severe problems) or no (no problems). Perceived need for care was measured with the question: 'Do you think the child needs professional help in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question could be answered with yes or no.

Indicators of socioeconomic position (SEP) were parental level of education, parental employment status, mean family income, mean home value appraisal and family composition. The level of education of the parents had four levels ranging from 1 (low) to 4 (high). A low education was defined as no education at all, or only elementary school. A high education was defined as higher vocational education or university. Parental employment status had two categories: 1) none of the parents is employed and 2) at least one of the parents is employed part-time. Further, mean family income and home value appraisal, based on the six-digit postal code system as used in the

Netherlands, were obtained from Statistics Netherlands (CBS, 2004). The indicator of family composition had 3 categories: 1) a two-parent family, 2) a single-parent family and 3) any other family composition.

Current mental health care use for emotional and behavioural problems was assessed with the following question in the parent questionnaire: 'Does the child receive professional care for problems in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question could be answered with yes or no. Health care use in the past two years was assessed with the following question: 'Did the child receive professional care in the last two years for problems in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?' (yes or no). Only the children who received professional care at the moment of signalling were excluded from analyses.

Data analyses

To describe the screen-positive sample (n=1,746) we examined ethnic differences in problem rates and in current mental health care use with χ^2 tests. To describe the final study sample (n= 1,215) we examined ethnic differences in SEP and severity using ANOVA or χ^2 tests. To investigate the main aim of this study, we examined ethnic differences in problem perception and perceived need of parents and teachers using χ^2 tests. With logistic regression analyses we adjusted the associations between ethnicity and parental problem perception and ethnicity and perceived need, for SEP and severity indicators. To adjust for teacher-level clustering, we conducted multilevel logistic regression analyses for teacher-reported problem perception and perceived need. These analyses were also adjusted for SEP and severity indicators. The levels we used included individual and teacher.

In the analyses on parent and teacher reports we first included ethnicity and gender in the model; then SEP indicators, and finally both SEP and severity indicators. In the analyses on teacher reports we only included mean family income and home value appraisal as SEP indicators as for 33% no parent reports were available to provide data on parental education, employment and family composition. The total SDQ impact score was only included as a severity indicator in the analyses (both parent and teacher report) of perceived need, not in the analyses of problem perception, as problem perception was one of the items of the impact score. Dutch ethnicity was the reference ethnicity. A significance level of ≤.05 was used for all analyses. Finally, we conducted additional analyses which were intended as sensitivity analyses. We repeated the analyses with ethnic specific cut-off points and with a higher cut-off point (P95) for all ethnic groups. These analyses show whether our results depend on a-priori, arbitrary, choices for the cut-off point used.

To account for missing values (Table 1) we used multiple imputation based on twenty imputed data sets ('multiple imputation' procedure in SPSS 17.0). In the analyses on parents we only included children with parental response on the questionnaire and in the analyses on teachers we included only children with teacher response. The data were imputed only for general characteristics and socioeconomic indicators, but not for severity indicators. Statistical analyses were performed using Statistical Package of Social Sciences, version 17.0 for Windows (SPSS Inc, Chicago, IL, USA). Multilevel analyses on teacher-reported data were performed using Mplus 6.11.

RESULTS

Table 1 shows ethnic differences in problem rates. The proportion of Dutch children scoring above the SDQ cut-off point (>P90) was lower than the proportion of children from the non-Dutch ethnic groups in both parent- $(\chi^2(5)=159.6, p<0.001)$ and teacher report $(\chi^2(5)=92.3, p<0.001)$ p<0.001). The proportion of Dutch children scoring above the P95 cut-off point was also lower than the proportion of children from non-Dutch ethnic groups in both parent- $(\chi^2(5)=74.5,$ p<0.001) and teacher report ($\chi^2(5)$ =52.5, p<0.001). Of all children scoring above P90, 14% currently received mental health care. Ethnic minority children were underrepresented: 17% Dutch, 14% Surinamese, 16% Antillean, 7% Turkish and 9% Moroccan children received mental health care ($\chi^2(4)=20.2$, p<0.001).

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Ethnicity	n (parents)	>P90 (parents) ¹ , %	>P95 (parents) ² , %	n (teachers)	>P90 (teachers) ¹ , %	>P95 (teachers) ² , %
Dutch	4.750	7.5	4.6	4.553	8.5	4.0
Surinamese	521	10.0	6.7	620	14.4	6.8
Antillean	264	21.7	14.3	340	19.3	9.5
Turkish	661	19.7	12.6	759	17.1	8.7
Moroccan	623	15.3	7.8	811	13.1	6.4
p-value		<0.001	<0.001		<0.001	<0.001

^{1:} SDQ cut-off point >P90 parents ≥14, teachers ≥12

Table 2 shows the characteristics of the final study sample (n=1,215) by ethnicity. Mean age of the children was 5.5 years and 63% was male. No ethnic differences were found in gender and age. Ethnic differences were found in past mental health care use (χ^2 (4)=47.5, p<0.001).

Table 2 also shows the socioeconomic and severity characteristics of the study population. Significant ethnic differences were found in mean family income, mean home value appraisal, parental employment status, parental education level and in family composition. Ethnic differences were found in the mean SDQ total scores in parent reports (p=0.05) but not in the mean impact score. No ethnic differences were found in mean SDQ total and impact score in teacher reports.

Problem perception

Overall, 63.1% of parents of screen positive children perceived their child to have emotional or behavioural problems. Table 3 shows clear ethnic differences in parental problem perception (χ^2 (4)=72.5, p<0.001). Higher levels of problem perception were found in Dutch parents (81%), versus 74% in Surinamese parents, 48% in Antillean parents, 47% in Moroccan parents and only 40% in Turkish parents.

²: SDQ cut-off point >P95 parents ≥16, teachers ≥15

Table 2. Characteristics of the study population (n=1,215)

General characteristics			Ethnicity			Missing*	p-value**
	Dutch	Surinamese	Antillean	Turkish	Moroccan	(%)	
Gender¹ (boy)	63.6	66.4	59.5	61.9	53.8	0	0.13
Age ²	5.3	5.4	5.4	5.4	5.5	1.0	0.20
	(0.03)	(0.07)	(0.07)	(0.06)	(0.08)		
Past mental health care use ^{1,3}	30.9	13.3	14.2	7.7	9.3	1.3	<0.001
Socioeconomic indicators							
Income ² (euro)	2212.0	1696.8	1605.4	1584.9	1532.8	18.0	
	(36.0)	(57.1)	(70.5)	(50.9)	(33.5)		<0.001
Home appraisal ² (K euro)	126.9	81.6	76.9	72.8	72.9	17.8	<0.001
	(2.9)	(3.8)	(5.2)	(2.6)	(2.4)		
Education ¹							
-high	27.4	10.1	15.7	5.2	8.2	35.3	<0.001
-middle 2	39.3	38.0	30.4	29.2	14.5		
-middle 1	26.7	35.8	26.6	27.4	28.2		
-low	6.5	16.0	23.1	38.2	49.2		
Employment¹ (≥1 parent)	92.2	74.5	53.7	61.2	41.9	16.6	<0.001
Family composition ¹							
-two parents	71.8	48.1	21.8	60.1	69.3	4.7	<0.001
-single parent	18.6	35.6	50.5	19.2	11.2		
-other	9.7	16.3	27.8	20.0	19.6		
Severity indicators							
SDQ score parents ²	16.6 (0.2)	17.6 (0.5)	17.0 (0.4)	16.9 (0.3)	16.3 (0.3)	NA	0.05
SDQ score teachers ²	15.1 (0.2)	15.5 (0.4)	15.6 (0.5)	15.4 (0.3)	15.2 (0.3)	NA	0.37
SDQ impact score parents ²	1.1 (0.1)	1.3 (0.3)	1.0 (0.3)	0.9 (0.2)	1.1 (0.4)	NA	0.18
SDQ impact score teachers ²	1.4 (0.1)	1.4 (0.2)	1.5 (0.2)	1.6 (0.2)	1.3 (0.1)	NA	0.30

^{*: %} missing before multiple imputations

Note: all children have a high SDQ total score (above >P90) according to parent, teacher or both

^{**:} p-value for differences between the ethnic groups

^{1:} percentage

^{2:} mean (SD)

³: current mental health care use is not included in past mental health care use

Table 3. Odds ratios (OR) for ethnicity, problem perception and perceived need for parent and teacher report (children with high SDQ total scores, n=599 parents, n=733 teachers)

	problem		problem perception (95% CI)	1	perceived need		perceived need (95% CI)	
		OR 1	OR 2	OR 3		OR 1	OR2	OR3
		(+ gender)	(+ SEP)	(+ severity)		(+ gender)	(+ SEP)	(+ severity)
Parent								
Dutch	9.08	1.0	1.0	1.0	25.6	1.0	1.0	1.0
Surinamese	74.0	0.7 (0.3-1.5)	0.7 (0.3-1.6)	0.7 (0.3-1.4)	15.5	0.5 (0.2-1.2)	0.5 (0.2-1.1)	0.3 (0.1-0.9)
Antillean	47.8	0.2 (0.1-0.4)	0.2 (0.1-0.4)	0.2 (0.1-0.4)	22.6	0.9 (0.4-1.8)	0.7 (0.3-1.5)	0.8 (0.3-1.9)
Turkish	40.0	0.2 (0.1-0.3)	0.2 (0.1-0.3)	0.2 (0.1-0.3)	22.8	0.9 (0.5-1.5)	0.7 (0.3-1.4)	0.8 (0.4-1.7)
Moroccan	46.9	0.2 (0.1-0.4)	0.2 (0.1-0.5)	0.3 (0.1-0.5)	19.5	0.8 (0.4-1.5)	0.8 (0.3-1.7)	0.9 (0.4-2.3)
p-value¹	<0.001				0.46			
Teacher								
Dutch	89.4	1.0	1.0	1.0	45.2	1.0	1.0	1.0
Surinamese	88.2	0.7 (0.3-1.7)	0.6 (0.3-1.6)	0.6 (0.2-1.6)	53.0	1.3 (0.8-2.8)	1.1 (0.6-2.4)	1.4 (0.6-4.0)
Antillean	87.9	0.8 (0.3-2.2)	0.7 (0.3-2.0)	0.7 (0.2-2.1)	52.2	1.3 (0.7-2.6)	1.0 (0.5-2.2)	1.0 (0.4-2.9)
Turkish	81.3	0.5 (0.2-1.1)	0.4 (0.2-1.0)	0.4 (0.2-0.9)	49.2	1.2 (0.7-2.1)	0.9 (0.5-1.7)	0.9 (0.4-2.1)
Moroccan	88.9	0.9 (0.5-2.8)	0.8 (0.4-2.4)	0.8 (0.3-2.7)	44.5	1.0 (0.5-1.9)	0.8 (0.4-1.6)	0.9 (0.4-2.3)
p-value ¹	0.15				0.43			
,		,						

Boldface type indicates statistically significant results at p<.05

^{1:} p-value for difference between ethnic groups

OR 1 parents/teachers: odds ratios adjusted for gender

OR 2 parents: adjusted odds ratios for gender + SEP (parental education level, employment status, home appraisal, income, family composition)

OR 2 teachers: adjusted odds ratios for gender + SEP (income and home appraisal of parents)

OR 3 problem perception parents/teachers: adjusted odds ratio for gender + SEP + severity characteristics (SDQ total score)

OR 3 perceived need parents/reachers: adjusted odds ratio for gender + SEP + severity characteristics (SDQ total score and SDQ impact score)

The lower level of problem perception in Antillean (OR: 0.2, 95% CI: 0.1-0.4), Turkish (OR: 0.2, 95% CI: 0.1-0.3), and Moroccan parents (OR: 0.3, 95% CI: 0.1-0.5) could not be explained by SEP or severity indicators. Differences between Surinamese and Dutch parents were smaller and not significant.

Overall, 87.2% of teachers perceived the child to have emotional or behavioural problems and problem perception varied between 81% and 89% across ethnicities (Table 3). No significant associations between problem perception and ethnicity were found for teachers of children with high SDQ total scores (Table 3), except for a lower problem perception for Turkish children (OR: 0.4, 95% CI: 0.2-0.9).

Perceived need

Overall, 22.9% of parents of screen positive children reported perceived need for mental health care for their child and perceived need ranged across ethnic groups between 16% and 26% (Table 3). No ethnic differences were found in perceived need in parents of children with high SDQ total scores except for a lower perceived need in Surinamese children after adjustment for SEP and severity indicators (OR: 0.3, 95% CI: 0.1-0.9). Overall, 47.8% of teachers reported perceived need for mental health care for the child and perceived need ranged across ethnic groups between 45% and 53%. No ethnic differences were found in perceived need in teachers of children with high SDO total scores (Table 3).

Additional analyses

Additional analyses including only children with very high SDQ scores (>P95) showed similar ethnic differences: problem perception was lower in Antillean, Turkish and Moroccan parents after correcting for SEP and severity. Selecting the P90 group based on ethnic specific P90 cutoffs did not change the findings in Table 3. When children with a score above the P95 cut-off were selected, problem perception and perceived need were higher in parents (PP: 69% and PN: 30%) as well as in teachers (PP: 93% and PN: 63%) than for children with a score above P90.

DISCUSSION

The current study shows that parental problem perception, regardless of high problem scores, is lower for parents with young children belonging to ethnic minority groups than for parents belonging to the ethnic majority, whereas teachers reported higher problem perception and perceived need with no ethnic differentiation.

Mental health care use was lower in young children from ethnic minority groups before and at the moment of signalling for problem behaviour at age 5-6 years. This extends findings in older age groups [31, 32] and therefore underlines the importance to gain more insight in the stages of help-seeking that precede care use, such as problem perception and perceived need for professional care. Our study confirms that problem perception and perceived need can be treated as two separate stages in the help-seeking models, like the Level and Filter model, as suggested by Logan and King [41]. According to the Levels and Filters model the first step in help-seeking is

parental problem recognition. Consistent with previous investigations we identified ethnic differences in problem rates reported by parents and teachers and we did find higher problem rates in ethnic minority children [32, 118]. Moreover, we demonstrated that in spite of the higher levels of reported problem behaviour the parental acknowledgement of these problems is lower in ethnic minority groups. Therefore, it seems plausible to distinguish in help-seeking models between parental problem recognition measured with signalling questionnaires and the concept of problem perception by parents, as suggested earlier by Zwaanswijk and colleagues [43]. Furthermore, perceived need was lower than problem perception in both parents and teachers, indicating two different concepts. Surprisingly, no ethnic differences in perceived need for parents and teachers were found. Whereas parental problem perception was low only in some ethnic minority groups, parental perceived need was low for all the ethnic groups. Teachers reported a higher problem perception and perceived need than parents in all ethnic groups.

The low problem perception in Antillean, Moroccan and Turkish parents may be influenced by several cultural factors and migration factors, since differences in problem perception could not be explained by a lower socioeconomic status or by ethnic variations in the severity of the problems. Four explanations, not mutually exclusive, will be discussed. First, Weisz et al. (1988) showed that cultural differences in concern and the expression of concern for psychosocial problems exist [120]. The degree of disturbance (the threshold) that is needed to label behaviour as problematic may vary across ethnicity. If this were the case, using a higher cut-off point would show smaller ethnic differences in problem perception. However, even at higher cut-off point (>P95), or when using ethnic-specific cut-off points, ethnic variations in problem perception were not smaller. Second, the definition of what constitutes a problem may vary by ethnicity. For this explanation, the degree of disturbance is not relevant, but the nature of the behaviour is. The same behaviour may be interpreted differently across cultures [121]. Third, parents in ethnic minority groups may feel afraid or ashamed to share their worries with outsiders or may fear negative consequences for their child or stigmatisation [122]. Finally, familiarity with the Dutch way of monitoring, measuring and organising care for children with problem behaviour may vary by migration factors. For example, Moroccan and Turkish migrants (parents) have to bridge a wider gap in terms of mastering Dutch language and habits, than migrants from former Dutch colonies. To fully understand the underlying mechanisms that affect these ethnic differences in parental problem perception qualitative research can be very valuable. Qualitative research can help bridge the gap between scientific evidence and clinical practice [54]. Furthermore, investigating whether the lower parental problem perception of children from ethnic minority groups is a reason for less mental health care use in these groups, and/or if ethnic and rater differences in problem perception and perceived need for care play a role in referral decisions by child health professionals, would be very valuable. However, such research must be conducted prospectively in children who have not received care yet.

The findings of this study are subject to some limitations. First, cultural differences could account for different responses to the questionnaire, and therefore could have biased our results. Questionnaires were translated into Turkish and Arabic, but we did not provide any further interpretation services. Second, a drawback of using country of birth of the parents as an indicator for ethnicity is that we were not able to identify the third generation migrant children; they were now categorised as Dutch. Third, the analyses were executed on cross-sectional data and we could not relate problem perception and perceived need to referral of the children by a Child Health Professional (CHP). Fourth, the adjustment for socioeconomic characteristics was based on data of income level of 2003 and home appraisal from 1999. In absolute terms these will have changed, yet we expect that the ranking changed less. This is supported by significant correlations with current educational level of the parents: R=.35 for home appraisal and R=.31 for income level, p<0.01. Fifth, since there was selective non-response in both teachers and parents there could have been an underestimation of parental problem perception and perceived need and an overestimation of teachers' problem perception and perceived need in ethnic minority groups. Last, we did not know the ethnic background of the teachers. However, since 86% of the teachers in the Rotterdam-Rijnmond area in the school year 2008-2009 were of Dutch ethnicity [123], bias by ethnic background of teachers may have existed, but probably affected the results for all ethnic groups in a similar way.

CONCLUSION

The present study contributes to the growing body of evidence suggesting that ethnic differences in the determinants of help-seeking behaviour exist. The low level of problem perception in non-Dutch parents may lead to their children receiving less professional care than Dutch children. Although early signalling of problems by a CHP in children is routine in the Dutch preventive health care system, parents can be regarded as the main gatekeepers for access to professional care for emotional and behavioural problems [124]. Parental problem perception is a strong predictor of service use [44] and without it, it is very unlikely that the CHP will refer the child to specialist mental health services. Teachers may therefore also play an important role in help-seeking, as CHP's can ask them to share their visions with the parents. It is important to have good communication between teachers and parents and for CHP's to have the teacher's vision on problem perception and perceived need, which correlates strongly with SDQ score, when discussing the high SDQ score in a preventive care setting. Using only parental problem perception and perceived need for care may lead to an underestimation of the impact of the child's problems and his/her need for care. Therefore, child health professionals should be aware of these ethnic differences and rater differences in problem perception and perceived need for professional care when assessing the need for referral in ethnic minority children.

Chapter 5

Ethnic differences in problem perception and perceived need as determinants of referral in young children with problem behaviour

Submitted for publication

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ABSTRACT

Background

An underrepresentation of ethnic minority children in mental health care settings is consistently reported. Yet, parents of ethnic minority children less often perceive problems in their children. Therefore, we examined if ethnic differences in problem perception and perceived need for professional care influence referral of 5-6-year-old children with emotional and behavioural problems by a child health professional (CHP) in the Dutch preventive care system.

Methods

For 10,951 children in grade two of elementary school, parents and/or teachers completed the Strengths and Difficulties Questionnaire (SDQ) as well as questions on problem perception (PP) and perceived need for professional care (PN). Referral information was requested from the Electronic Child Records (ECR) for 1,559 children with a high (>P90) SDQ score who visited a routine health assessment in the school year 2008-2009. We excluded children in our sample who could not be linked to the ECR (n=316) and children who were currently receiving professional care for their problems (n=209), resulting in n=1,034 for analysis.

Results

CHP's referred 144 children (14%) during the routine health assessments. Referral rates did not differ between ethnic minority children and ethnic majority children. Parental PP was positively associated with referral by a CHP (OR: 1.9, 95% CI: 1.I-3.5), as well as PN in teachers (OR: 2.4, 95% CI: 1.3-4.5). Interactions of ethnicity with PP and PN were non-significant (p>0.15).

Conclusions

Despite a lower problem perception in ethnic minority parents when compared to ethnic majority parents, no ethnic differences were found in referral of children with problem behaviour in a preventive health care setting.

INTRODUCTION

The prevalence of emotional and behavioural problems as reported by parents and teachers in young children is high [96]. Early detection and treatment of these problems in childhood leads to benefits regarding development, well-being and health [2, 3]. However, research describing the help-seeking process in children with emotional or behavioural problems suggests that children from ethnic minority groups with emotional and behavioural problems less often use professional services than ethnic majority children [30-32]. For example, ethnic minority children in the Netherlands (aged 5-11 years old) less often receive treatment for emotional and behavioural problems than ethnic majority children, after adjusting for level of problem behaviour [32]. To explain these ethnic differences in care use, determinants of referral should be studied. Problem perception and perceived need for professional care are important determinants of referral and service use and differ by ethnicity [46, 48, 92]. For example, parents belonging to the ethnic minority less often perceive problems in their children than parents belonging to the ethnic majority, at equally high rates of problem behaviour [92]. However, if and how ethnic differences in problem perception and perceived need for care influence referral decisions in professionals remains unclear.

Models that describe help-seeking pathways, such as the 'Levels and Filters model' by Goldberg and Huxley (1980, 1992), consider help-seeking as a stage-like process [33, 34]. Verhulst and Koot (1992) adapted the Levels and Filters model and made it applicable to the process of help-seeking for mental health problems in children [35]. The levels in their model represent different circumscribed populations of children with mental health problems, ranging from the lowest, broad level of 'community' (not receiving professional care) to the highest, narrow level of 'inpatients' (receiving inpatient care). To move to a next level in the process of help-seeking, it is necessary to pass through the corresponding filter. For young children, parental problem recognition is usually considered the first filter of the help-seeking process. Logan and King (2001) proposed that the level 'problem recognition' of the Levels and Filters model should consist of several stages, among which the initial acknowledgment of a child's distress and the recognition that the problem is psychological and severe enough to merit professional attention [41]. These stages are comparable to the concepts of problem perception and perceived need for professional care that we used in this study. In the Levels and Filters model, parental problem perception and perceived need for professional care are followed by problem recognition and referral by a professional [36, 41, 125]. Besides parental problem perception and perceived need for care, teachers' perception of problems and need for care are important predictors of referral and care use in children [44, 45]. It is important to include perceptions of both parents and teachers, as the assessment of problem behaviour in different ethnic groups depends upon the informant used [27]. These inter-rater differences can reflect both perceptual bias [75] or true differences in the problem behaviour of children across settings [76].

Investigating the influence of ethnic differences in problem recognition on referral is especially important in the light of the lower problem perception in ethnic minority parents when compared to ethnic majority parents [92]. The recognition of problems in children by a child health professional (CHP) seems to be largely dependent on parental problem recognition. For example, in the United Kingdom, parental problem perception and expression of concern in a

consultation with a CHP increased the sensitivity of problem recognition in the CHP from 26% to 88% [49]. In the Netherlands, ethnic minority children whose parents reported child problems in the deviant range of the Child Behavior Checklist [42] were less often identified by a CHP as having a problems than ethnic majority children [50]. However, previous research does not provide a clear picture of how many children are referred after problem identification by a CHP, nor whether ethnic differences in problem recognition by parents and teachers influence referral decisions. If ethnic minority parents - as a result of a low problem perception - do not discuss problems with the CHP, then referral may be lower for ethnic minority children than for ethnic majority children.

Therefore, in this study we investigated the role of ethnic differences in problem perception and perceived need on referral by a CHP in a preventive care setting in the Netherlands. In countries where preventive health screening is used, as in the Netherlands, more than 90% of all children regularly consult a CHP (a pediatrician or nurse working in the preventive child health care) with their parents for a mental and physical check-up during a 'routine health assessment' [126]. The main aim of this study was to investigate if ethnic differences in referral by a CHP already occur at a very young age. We studied this in a large group of 5-6- year-old children, with a high score on the Strengths and Difficulties Questionnaire (SDQ), belonging to the largest ethnic groups in the Netherlands (from a Dutch, Moroccan, Turkish, Antillean, Surinamese or other society of origin). We hypothesised that ethnic minority children would be referred less often than ethnic majority children, since for ethnic minority children parental problem perception is lower than for Dutch children [92] as well as problem identification by CHP's [50] and professional care use [32]. A requisition for the hypothesis is that problem perception and perceived need for care positively associate with referral. This has never been confirmed for a preventive care setting, where all parents are seen, not only parents who actively seek help for their child.

METHODS

Setting

The Dutch preventive care system offers publicly funded preventive programs for all children from birth to 19 years. The preventive care system is responsible for monitoring and safeguarding the physical and mental development of all children. As part of this system, more than 90% of all children undergo 3 to 4 routine health assessments by a CHP during their school careers; the first in grade two of primary school (mean age: 5-6 years). Screening questionnaires, including the Strengths and Difficulties Questionnaire (SDQ), are used to identify children with emotional and/or behavioural problems before the appointment with the CHP. During the health assessment the CHP discusses psychosocial well-being of the child with the parents. The CHP can give parents of children with problem behaviour advice or reassurance, the CHP can make a new appointment with the parents and the child for further diagnosis and/or counselling, or the CHP can refer these children to professional care. Children and their parents can be referred to preventive care (for example to enhance parenting skills), to specialised youth social work or child protective services, to the child mental health system or to other sources of care (e.g. care provided

by school). Child mental health services in the Netherlands provide psychiatric diagnostic assessment, outpatient and inpatient treatment.

In this study, referral was defined as actual referral of the child or a new appointment with the CHP after the routine health assessment for more in-depth diagnostic assessment and/or counselling for the problem behaviour. The referral decisions were recorded by CHP's in Electronic Child Records (ECR). The ECR are digital medical records that follow the child from birth until he/she is 19 years of age. It is used in the Dutch preventive care system to monitor the development of children.

Subjects

In the school year 2008-2009, from a total of 11,987 children enrolled in grade two (5-6 years old) of 94% of all mainstream elementary schools in the Rotterdam-Rijnmond area, 10,951 (91%) children were screened with the Strengths and Difficulties Questionnaire (SDQ). The flowchart in Figure 1 shows the sampling process. In total, for 8,114 (68%) children parents filled out the questionnaire and for 9,397 (78%) children teachers filled out the questionnaire, of which 1,559 children had a high SDQ total difficulties score reported by parent, teacher or both. A high SDQ total score was defined as a score above the 90th percentile (>P90). The cut-off point for parents was 14 and for teachers 13. These cut-offs were based on a pilot study among children eligible for the preventive health assessment in grade 2 at elementary school in the Rotterdam-Rijnmond area. In the group of 1,559 children with a high SDQ score (not receiving treatment), parental consent for linkage with the ECR was refused for 34 children (3%), and 282 children (18%) could not be linked to the ECR for various reasons, among which that the SDQ was completed after the routine health assessment, children moved outside the Rotterdam-Rijnmond area, or children missed required identifiers (unique child codes) for linkage. Children already in treatment for emotional and/or behavioural problems at the moment of signalling problems were also excluded from the analyses (n=209). In total, data on referral by CHP's was available for 1,034 (66%) of the 1,559 children. Of these 1,034 children, 584 children had a high score on the SDQ according to parent report, 548 children had a high score according to teacher report and 98 children had a high SDQ score according to both parent and teacher report. Note that not for all children both parent and teacher reports were available. There was an overrepresentation of ethnic minority children in the screen positive (>P90) group [92].

The group of children with and the group without ECR information did not differ significantly from each other on the measures used in this study, except for teacher's perceived need. Teachers in the group of children with ECR information had a significantly lower perceived need (57% versus 69%, p=0.007) than teachers in the group without ECR information available.

The study protocol was approved by the Medical-Ethical Committee of the Erasmus Medical Centre of Rotterdam. All parents and teachers included in the study gave informed consent for the use of ECR information.

Measures

A child was classified as ethnic Dutch, Surinamese, Antillean, Turkish, Moroccan or other, based on the country of birth of the child or at least one of his/her parents [55].

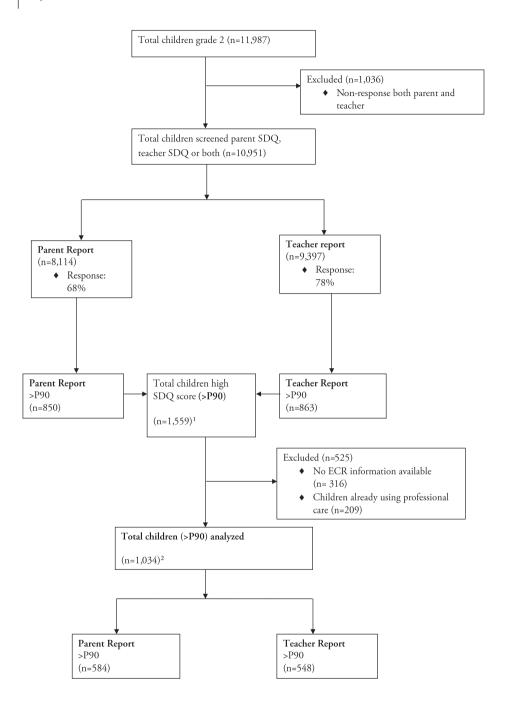


Figure 1. Flowchart of the sampling process

^{1: 154} both >P90 parent- and teacher report

^{2: 98} both >P90 teacher- and parent report

If the country of birth of one of the parents, or the child itself was outside the Netherlands, the child was classified as non-Dutch [55]. The largest ethnic minority groups living in the Netherlands migrated from Mediterranean countries, mainly Turkey and Morocco, as labour migrants since the 1960s and early 1970s. Surinamese and Antillean migrants came, from South America and the Caribbean respectively, to the Netherlands during the process of decolonisation after 1975. The group containing other ethnicities is very diverse; it comprises among others labour migrants, refugees and knowledge migrants.

The ECR provided information about referral decisions made by CHP's. The ECR data were linked to the children with high SDQ scores using unique child codes. Anonymity of the subjects was adequately protected, since these unique codes are not traceable to individual patients.

Parents and teachers completed the Dutch, Arabic or Turkish version of the Strengths and Difficulties Questionnaire (SDQ). The SDQ is a reliable and valid 25-item signalling measure to identify 3-16-year-old children with emotional and behavioural problems [78-81]. The SDQ measures conduct problems, inattention-hyperactivity, emotional problems, peer problems and prosocial behaviour and measures the impact of the problems. SDQ total score was used as an indicator of severity of problems in the analyses.

To measure problem perception the first impact question of the SDQ [81] was used: 'Do you think the child has a problem on one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question was scored on a 4-point scale, ranging from (1) no problems to (4) yes, severe problems. The item was recoded as yes (little to severe problems) or no (no problems). Perceived need for care was measured with the question: 'Do you think the child needs professional help in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. This question could be answered with yes or no.

Indicators of socioeconomic position (SEP) were parental level of education and average neighbourhood family income. Parental educational level ranged from I (low; no education at all, or only elementary school) to 4 (high; higher vocational education or university degree). Average neighbourhood family income (further referred to as family income), based on the six-digit postal code system as used in the Netherlands, was obtained from Statistics Netherlands (CBS, 2004).

Current mental health care use for emotional and behavioural problems was assessed with the following question in the parent questionnaire: 'Does the child receive professional care for problems in one or more of the following areas: emotions, concentration, behaviour or the ability to get along with other people?'. Children who received professional care at the moment of signalling problems were excluded from analyses.

Data analyses

We examined differences in referral by ethnicity, SEP and severity of the problems using ANOVA or χ^2 tests. In all subsequent analyses, data were analysed separately for children who scored >P90 on the SDQ according to their parents, and for children who scored >P90 according to their teachers. First, we analysed ethnic differences in referral with multivariate logistic regression analyses. Second, we analysed referral by problem perception and perceived need for care and the interaction between ethnicity and problem perception. Two models were run for each of the

research questions, the first including gender and the dependent variables of interest and the second additionally including parental education level and family income (SEP) and SDQ total score. In the analyses on teacher reports we only included family income as SEP indicator, as for 33% no parent reports were available to provide data on parental education. A significance level of ≤.05 was used for all analyses. For teacher data we adjusted for clustering by using multilevel logistic regression.

To account for missing values we used multiple imputation based on twenty imputed data sets ('multiple imputation' procedure in SPSS 17.0). The data were imputed for general characteristics (age, ethnicity, current care use and gender), socioeconomic indicators and not for SDQ variables or for ECR data. Statistical analyses were performed using Statistical Package of Social Sciences, version 17.0 for Windows (SPSS Inc, Chicago, IL, USA). Multilevel analyses on teacher-reported data were performed using Mplus 6.11 [127].

RESULTS

Of the 1,034 children, 144 children (13,9%) were referred by a CHP. Of the 584 children with a high score on the SDQ (>P90) according to parental report, 89 children (15.2%) were referred. Of the 548 children with a high score on the SDQ (>P90) according to teacher report, 77 children (14.1%) were referred. Of the 98 children with a high score on the SDQ according to both parent and teacher report 22 children were referred (22.4%).

Table 1 shows the general characteristics of the study sample (n=1,034) by referral. Mean age of the children was 5.5 years and 62% was male. More boys (16%) were referred than girls (11%), (χ^2 (1)=5.2, p=0.02). No ethnic differences in referral were found. Table 1 also shows the socioeconomic and severity characteristics of the study population. There were no ethnic differences or socioeconomic differences in referral. Further, the mean SDQ score of the parents and teachers were similar in the referred group and the non-referred group.

Table 2 (upper panel) shows referral by ethnicity for children with a high SDQ score according to parent report. Compared to Dutch children, Turkish children were more referred. This difference was no longer significant after adjustment for confounders. In the group of children with a high SDQ score according to teacher report, there were no ethnic differences in referral (Table 2, lower panel).

For children with a high SDQ score according to parental report, 60% of the parents had a problem perception and 22% reported a perceived need for professional care. Higher levels of problem perception were found in Dutch parents (80%), versus 72% in Surinamese parents, 50% in parents from an other ethnic origin, 49% in Antillean parents, 43% in Moroccan parents and 40% in Turkish parents (χ^2 (5)=71.5, p<0.001). For children with a high score according to teacher report, in 89% of the teachers had a corresponding problem perception and 53% reported a perceived need for care, with no ethnic differences. Problem perception and perceived need for care reported by parents were related to higher referral rates (Table 3). Similarly, higher perceived need for care by teachers was related to higher referral rates. Interactions of ethnicity with PP and PN were not significant (all p-values >0.15).

Table 1. Characteristics of the study population by referral (n=1,034)

General characteristics	Referral	No referral	p-value*
Gender¹			
- Boy	70.5	60.3	0.02
- Girl	29.5	39.7	
Age ²	5.5 (0.17)	5.5 (0.11)	0.29
Ethnicity ¹			
- Dutch	31.7	36.7	0.52
- Surinamese	11.4	9.5	
- Antillean	5.9	7.3	
- Turkish	19.8	14.7	
- Moroccan	11.8	13.5	
- Other	19.3	18.4	
Socioeconomic indicators (SEP)			
Income ² (euro)	1785.9 (64.66)	1828.8 (26.92)	0.39
Education ¹			
-high	27.9	30.2	0.53
-middle 2	30.3	33.2	
-middle 1	28.7	26.0	
-low	13.0	10.6	
Severity indicators			
SDQ score parents ²	17.3 (0.34)	16.6 (0.12)	0.24
SDQ score teachers ²	16.9 (0.45)	16.1 (0.17)	0.06

^{*:} p-value for differences between referred and non-referred groups

Note: all children have a high SDQ total score (above >P90) according to parent, teacher or both

^{1:} percentage

^{2:} mean (SE)

Table 2. Associations between referral and ethnicity for children with high SDQ scores (>P90)

		(95% CI)	
	n Referral (%)	OR 1 (+ gender)	OR 2 (+ SEP + severity)
Parent >P90 (n=585)			
Dutch	29 (13.4)	1.0	1.0
Surinamese	8 (18.1)	1.4 (0.6-3.3)	1.3 (0.5-3.2)
Antillean	4 (10.0)	0.7 (0.2-2.2)	0.7 (0.2-2.3)
Turkish	21 (22.8)	2.0 (1.1-3.7)	1.9 (0.9-3.7)
Moroccan	9 (12.1)	1.0 (0.4-2.2)	0.9 (0.4-2.2)
Other	18 (15.7)	1.3 (0.7-2.4)	1.2 (0.6-2.3)
p-value ¹	0.26		
Teacher >P90 (n=549)			
Dutch	25 (13.5)	1.0	1.0
Surinamese	11 (17.3)	1.3 (0.6-3.1)	1.3 (0.5-3.2)
Antillean	7 (15.9)	1.2 (0.4-3.6)	1.2 (0.4-3.4)
Turkish	12 (13.2)	1.0 (0.4-2.3)	1.0 (0.4-2.3)
Moroccan	9 (12.4)	0.9 (0.3-2.3)	0.9 (0.3-2.5)
Other	13 (15.7)	0.9 (0.4-2.3)	0.9 (0.3-2.2)
p-value ¹	0.38		

Boldface type indicates statistically significant results at p<.05

^{1:} p-value for difference between ethnic groups

OR 1 parents/teachers: odds ratios adjusted for gender

OR 2 parents: adjusted odds ratio for gender + SEP + severity characteristics (parental educational level, family income and SDQ total score)

OR 2 teachers: adjusted odds ratio for gender + SEP + severity characteristics (family income and teachers SDQ total score

Table 3. Associations between referral, problem perception and per	erceived need for children with high
SDQ scores (>P90)	

	n	OR 1 (95% CI)	OR 2 (95% CI)
	Referral (%)	(+ gender)	(+ SEP + severity)
Parent >P90 (n=584)			
No problem perception	26 (11.2)	1.0	1.0
Problem perception	64 (18.0)	1.7 (1.0-2.9)	1.9 (1.1-3.6)
p-value ¹	0.02		
No perceived need	60 (13.3)	1.0	1.0
Perceived need	29 (22.3)	1.8 (1.1-3.1)	1.7 (0.9-3.0)
p-value ¹	0.01		
Teacher >P90 (n=548)			
No problem perception	6 (10.5)	1.0	1.0
Problem perception	70 (14.4)	1.4 (0.5-3.8)	1.2 (0.4-3.5)
p-value ¹	0.37		
No perceived need	21 (8.3)	1.0	1.0
Perceived need	55 (18.8)	2.5 (1.4-4.4)	2.4 (1.3-4.3)
p-value ¹	<0.001		

Boldface type indicates statistically significant results at p<.05

DISCUSSION

This study shows that despite a lower problem perception in ethnic minority parents when compared to ethnic majority parents, no ethnic differences were found in referral of 5-6-year-old children with emotional and behavioural problems in a preventive health care setting. Parental problem recognition was positively associated with referral. Perceived need of teachers was also positively associated with referral.

As hypothesised, problem perception and perceived need for professional care were important predictors of referral in a monitoring setting. However, contrary to our expectations the low parental problem perception in ethnic minority groups did not lead to less referral. In the Netherlands, earlier studies by Brugman et al. (2001) and Crone et al. (2010) showed

^{1:} p-value for difference between referred and non-referred groups

OR 1 parents/teachers: odds ratios adjusted for gender

OR 2 parents: adjusted odds ratio for gender + SEP + severity characteristics (parental educational level, family income and SDQ total score) + ethnicity

OR 2 teachers: adjusted odds ratio for gender + SEP + severity characteristics (family income and teacher SDQ total score) + ethnicity

that ethnic minority status was not related to problem identification and referral by a CHP during a routine health assessment among older children (5-15 years old) of the general population. Yet, when children were preselected based on a high score (>P90) on the Child Behavior Checklist (CBCL), problem identification by a CHP during a routine health assessment was less likely among children of economic immigrant parents than in children of ethnic majority parents [50]. However, problem identification by a CHP is different from referral by a CHP, since not all children identified will be referred. Therefore, problem identification in CHP's may be influenced by ethnic differences in parental problem perception, whereas referral is not. Future studies should differentiate between problem identification and referral by a professional when investigating determinants of help-seeking for young children. Further, in most literature on the help-seeking process, no clear distinction is made between referral to and of use of professional care [37]. Studies examining professional care use/referral in different ethnic groups report mixed findings regarding the underrepresentation of ethnic minority children in professional care across countries [29]. However, in the Netherlands, ethnic minority children less often receive treatment for emotional and behavioural problems than ethnic majority children [32], whereas we found no ethnic differences in referral of children with problem behaviour. This may mean that barriers in receiving care following referral exist. Many children do not access the recommended mental health services within six months after referral [128]. Ethnic differences in other barriers of access to care, such as scheduling and waiting lists, may explain the lower service use reported in ethnic minority children [32].

The correspondence between perceived need for professional care and referral was not very strong; only 22% of the children for whom parents reported a need for professional care were actually referred. Whereas CHP's had access to the SDQ scores and the additional information concerning parental problem perception and perceived need for professional care, we do not know if parents actually expressed their need for care during the health assessment. Studies in the United States showed that there are many parents who have concerns about their child's behaviour, but refrain from talking to professionals about these concerns [129, 130]. The reasons for parental non-disclosure can be various. For example, parents may perceive a stigma on mental health problems, they may have a fear of being blamed for their child's behaviour or they may be skeptic about the ability of mental health care providers to treat problems effectively [131]. Another reason for the low referral rate may be that the problems of the child became less severe or less disturbing for parents and/or teachers in the period between assessing problems with the SDQ and the health assessment. Mean time between completing the SDQ and the visit to the CHP was 14 weeks (SD: 19.4).

In summary, we showed that the Levels and Filters model is not limited to describing the helpseeking process in ethnic majority groups, but is also useful for describing this process in ethnic minority groups. Furthermore, it was useful to include problem perception and perceived need for professional care of teachers in the model, besides parental perceptions. This is not surprising, since other studies already showed that teachers are an important factor in the help-seeking process of parents of children with emotional and behavioural problems [90, 99]. However, there are several limitations in adopting the Levels and Filters model in a preventive care setting, as children may not move necessarily between the proposed stages in a uniform matter. For example,

the first two filters of the model may appear in reverse order in respect to the original order of the model. In the Netherlands, all children are invited for a routine health assessment, irrespective of parental and/or teachers' problem perception or perceived need for care. In this way, problem recognition by a professional (filter 2) can influence the problem perception and perceived need for care in parents and teachers (filter 1). Therefore, parental and teachers' problem recognition may have a smaller predictive effect on referral than in a non-preventive care setting.

The findings of this study are subject to some limitations. First, this study did not provide data on the monitoring process after the routine health assessment. Second, a drawback of using country of birth of the parents as an indicator for ethnicity is that we were not able to identify the third generation migrant children; they were now categorised as Dutch. Third, there was no systematic record of conversations between parents and CHP's during the routine health assessment. Therefore, it is unknown whether and how exactly the problem behaviour of children was discussed.

CONCLUSION

In the past two decades, there has been an increasing awareness of the importance of early identification of emotional and/or behavioural problems [39]. This resulted in several initiatives and interventions for improving identification in preventive health care systems. The effectiveness of preventive services, however, will be determined by their ability to reach those children who are most in need of services. Our study showed no ethnic differences in referral in a group of 5-6-year-old children with problem behaviour. However, only a small percentage of children in which parents and/or teachers reported perceived need for professional care was referred to professional care. Therefore, the focus in future research should be on other determinants of referral, besides problem recognition. It is important that we find ways to determine which children are really in need of professional care and to find out whether unmet need for care already exists among very young children.

Chapter 6

Exploring underutilisation of child mental health care in empirical research:

Why the numbers don't add up

Submitted for publication

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ABSTRACT

Epidemiological research has so far not been able to provide convincing explanations for ethnic differences in mental health care use. In spite of equal access to mental health care being a priority on the global health agenda and much quantitative research into this issue, underutilisation of mental health care in children is still reported consistently, in particular for children from ethnic minority groups. We argue that quantitative research methods alone are not well equipped to answer this why question. Therefore, we offer an alternative by showing that qualitative research is an important method to address the question why few children with problems receive mental health care. In this paper, we explore, in an exemplary way, two determinants of help-seeking (i.e. parental explanatory models and beliefs) through qualitative interviews. We provide several explanations for the underutilisation of child mental health care in ethnic minority groups. Modern psychiatric epidemiology should aim at combining methods in an empirical circle, in which quantitative research provides research questions for qualitative research and vice versa. Only then we can bridge the gap between empirical research and the development of effective public policies with regard to the mental health needs of all children.

INTRODUCTION

Psychiatric epidemiology can be seen as empirical research on the distribution and determinants of psychiatric disease frequency [132] that typically involves quantification [125]. One of the most important contributions of epidemiological research to the field of child psychopathology has been consistent report of a gap between the number of children with mental health problems and the number that use professional care for these problems [125]. The World Health Organization, for example, concluded in its Atlas: Child and Adolescent Mental Health Resources project, that only a small proportion of young children with mental health problems visit mental health care providers [58]. Currently, a broad understanding exists, gained through empirical research methods, about the quantitative aspects ('what, when, how many and how much') of mental health service use in children. Until now however, epidemiological research has not been able to provide a convincing answer to the question why not all children receive the care they may need. This is especially disquieting in the context of recent worldwide policy that calls to understand help-seeking behavior in context, especially for disadvantaged minority groups [133]. In this paper we will argue that quantitative methods alone are not very well equipped to answer this 'why' question.

Mental health problems in the youngest age groups are often reported by parents or teachers [29, 134] and current global epidemiological research reports consistently that up to 20% of all children suffer from a mental disorder during childhood or adolescence [133]. The rates of actual service use differ within and across countries; in Western countries, between 5% and 21% of all children in the community have used some sort of service for mental health problems in the previous year [37]. Rates of specialist mental health treatment for children across countries are even lower: up to 8% of all children have used these services [37]. Moreover, an underrepresentation of ethnic minority children in professional mental health care settings is consistently reported [30-32, 61]. These numbers clearly show that only a small proportion of children with mental health problems receive professional care by specialist services, that many of these children are receiving care from other types of services and that a substantial number of children receive no care at all [29]. It is important to determine among (ethnic minority) children within the group that does not receive professional care if an unmet need for professional care exists, or if the problem can be solved without.

So far, epidemiological studies have provided us with estimates of the prevalence of psychopathology in children. Moreover, they taught us that models that describe help-seeking as a stage-like process, like the Levels and Filters model, can facilitate our understanding of the help-seeking process [29, 37]. Furthermore, this type of research showed that there are numerous characteristics and processes that can influence the help-seeking process of children through their parents [36, 41, 99, 135]. However, empirical research has mainly focused on the examination of individual (e.g. demographic characteristics) and structural (e.g. financial barriers) determinants. The impact of, for example, cultural and social processes on help-seeking processes received much less attention. Probably, quantitative methods are not well equipped to study these processes, since it is very difficult to capture dynamic processes in static variables [136]. Therefore, the predominance of quantitative research has limited the progress in understanding the underlying

reasons of ethnic differences in use of and access to mental health care. More detailed answers to the 'why' question are very important for development of effective and empirically informed public policies with regard to the mental health needs of all children [57], which is a priority on the global health agenda [58].

Qualitative research is a different way to address research questions, aimed at discovering and describing social and cultural phenomena in specific situations or settings. Important models that can help explain ethnic differences in health care use focus on health beliefs and explanatory models of the parents [51, 52]. Ethnic differences in health care use can occur, for example, when the beliefs of ethnic minority parents on the cause of the problem and the possible cure conflict with the beliefs of the dominant culture, on which the health care system is based. The qualitative approach is particularly useful in answering research questions about the motives behind these differences.

Kleinman's socioanthropological theory of family explanatory models suggests that individuals have unique explanations and beliefs regarding the cause and cure of problem behaviour, which can be influenced by culture [52]. Two main models can be distinguished: biopsychiatric models, which emphasise the roots of the problems in anatomy, heredity and disease processes, and situational models, which describe psychological distress in the context of social and interpersonal situations [52]. Earlier research on explanatory models of depression suggests that situational models are often associated with negative beliefs about professional treatment as a solution for the problems [53]. To investigate these processes properly, individuals must have a chance to speak about their feelings, fears and motives that are connected, in this case, to parental help-seeking behaviour. Through capturing the thinking processes of parents, qualitative research can help us understand why parents do not seek professional help for mental health problems of their children, or why parents report that they do not need help. In this way, qualitative research can help improve the transfer between quantitative research and clinical practice [54].

Qualitative research is sometimes regarded as anecdotal, unscientific and influenced by the opinions of the researcher [137]. However, good qualitative research uses systematic data collection and analyses, and has repeatedly proven useful in pursuing the type of research questions that are not easily answerable by quantitative research [138]. With a qualitative approach, motives and thoughts of individuals can be explored, and thereafter inform future studies on a larger, quantitative scale.

This paper will show that qualitative research is a fruitful method to gain more understanding about the (cultural) context of pathways in care for different ethnic groups and to understand why so few children receive care for mental health problems. In an illustrative way, we analysed our own qualitative data on ethnic differences in parental explanatory models and beliefs, and demonstrate how these determinants can behave as perceived barriers and facilitators in the process of help-seeking. Furthermore, new directions are proposed for future investigations in this area, accompanied by a discussion of the role of qualitative research methods in empirical research. The conceptual framework of the Levels and Filters model [33, 34] was used in this study sample of parents to describe the pathways in care of their children (7-8-years old) with mental health problems (Figure 1). The study setting and design are described in Box 1.

BOX 1

Study setting and design

In the Netherlands, preventive mental health care screening is used to identify children with mental health problems and, if necessary, to assure that they receive adequate care for their problems. The first screening moment is at elementary school (grade 2), when children are 5-6 years old. All parents of children in grade 2 of the elementary school are invited for a routine health assessment by a child health professional (CHP). Before the assessment, parents as well as teachers are asked to complete the Strengths and Difficulties Questionnaire (SDQ), which is used in the preventive care setting as a signalling instrument [77, 78]. Through this questionnaire, both parents and CHP's can prepare the routine health assessment by anticipating issues about the mental health of their child that may warrant attention in the assessment. At the routine health assessment, a CHP can decide to refer a child to specialist mental health care. In the school year 2008-2009, 10,951 children in grade 2 of elementary school were screened for mental health problems in the preventive child health care in the Rotterdam-Rijnmond area. In a quantitative study we analysed ethnic differences in parental recognition of mental health problems and need for care.

We enriched this quantitative approach with a qualitative study, aimed to study reasons for ethnic differences in pathways in care for mental health problems. We used semi-structured interviews to describe the history, experiences and determinants of the help-seeking process of 40 parents of 7-8—year-old children from four ethnic groups (n=10 each), approximately 18 months after they received their routine health assessment. Parents were eligible for the qualitative study if their child had a high score on the SDQ (>P90 according to parent and/or teacher) at the moment of signalling problems, if they received a routine health assessment after signalling and if they belonged to one of the four largest ethnic groups in the Netherlands (Dutch, Surinamese, Turkish or Moroccan). Turkish and Moroccan migrants originally migrated as labor migrants since the 1960s and early 1970s. Surinamese migrants first came from South America to the Netherlands during the process of decolonisation after 1975. For a more detailed description of the study population we refer to our study on ethnic differences in problem perception and perceived need for care [92].

One trained interviewer (F.B.) carried out the interviews. All parents were interviewed at home. For two interviews in the Moroccan group, an Arabic interpreter assisted the interviewer. For data analyses, all interviews were audio-recorded and

transcribed verbatim. Next, the interviews were segmented into broad categories reflecting the topic-list. The segmented data were further analysed using procedures inherent to the grounded theory approach. Grounded theory offers a systematic approach to qualitative analysis, in which data becomes centre-stage in reaching a theoretical description of a phenomenon and explaining it [138]. Each transcript was read and coded by two independent researchers. In a debriefing, all researchers discussed the coding and made adaptations to reach consensus. The software program Kwalitan 5.0 was used to organise the data [139]. For this paper, we used parts of the interviews (i.e. the parental explanatory models and beliefs) in an exemplary way. More details about the design of the study and about the interviews are available on request.

EXPLORING DETERMINANTS OF HELP-SEEKING

Description of the study population

In the interviews, most parents described a wide range of concerns about the behaviour of their child. The concerns fell into five main domains: (1) behavioural problems, including aggression, temper tantrums and disruptive behaviour; (2) emotional problems, including anxiety, poor self-esteem and self-harm; (3) hyperactivity and concentration problems; (4) learning and developmental problems, including autism spectrum disorders; and (5) other problems, including eating- and peer problems. Hyperactivity and concentration problems were most frequently mentioned by parents from ethnic minority groups, while (pervasive) developmental problems were most frequently mentioned by Dutch parents.

The role of explanatory models and beliefs in the help-seeking process will be the main focus here. As a first step we described the study population through exploring the stages in this helpseeking process for the different ethnic groups. The Levels and Filters model was useful as a framework to describe these pathways in care in the interviews. Figure 1 shows that each of the filters was present, except for the last filter ('admission to inpatient mental health care'), since no children in the study sample were referred from outpatient to inpatient psychiatric treatment. In total, 4 children received care via the preventive health assessment and 17 children received care via own initiative of parents and/or school.

Ethnic differences in the help-seeking process were also visible, warranting more in-depth study of the reasons of these differences. For example, Dutch parents developed problem recognition earlier in the child's life than ethnic minority parents. In ethnic minorities, problem recognition often developed during the follow-up period, in which the child transitioned from kindergarten

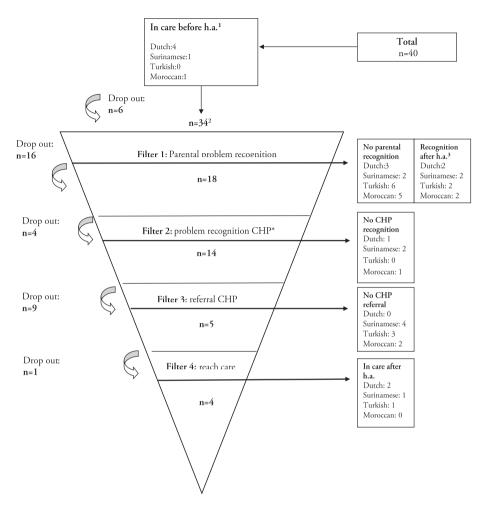


Figure 1. Flowchart pathways in care after the health assessment by ethnicity

- * CHP = child health professional
- ¹ Children receiving professional care before health assessment (h.a.)
- ² Of this group of children, 17 children received care at the time of the interview via initiative of the parents and/or school (not via h.a.)
- ³ Children with no parental problem recognition during h.a., but problem recognition developed after h.a.

('playing': grade 2) to elementary school ('learning': grade 3). Problem recognition appeared when the school achievements of the child deteriorated, often in combination with teachers expressing their concerns.

Regarding the role of the CHP, two findings were striking. The first is that CHP's did not discuss the child's emotional and behavioural problems when the parents did not express concerns, regardless of the high SDQ score. The second is that in many cases expression of problem recognition by the CHP was not followed by referral. Most Surinamese parents agreed with the

CHP not to refer their child to professional care. Some Moroccan parents, however, expected referral and were actually disappointed in not being referred by the CHP.

Explanatory models about the cause of problems and beliefs about the cure

To explore the role of parental explanatory models and beliefs about the cause and cure of their child's problems as determinants of help-seeking, we distinguished two main theoretical models: the biopsychiatric and the situational model. Four explanatory models about the cause of the problems emerged from the interviews: (1) genetics, (2) biological causes (e.g. children being born prematurely, problems during pregnancy), (3) character, and (4) environment (e.g. divorce of the parents, child being bullied, traumatic experiences). The first three explanations all fit the biopsychiatric model. However, parents in our sample made a clear distinction between genetics (recognisable behaviour: 'it runs in the family') and character (the behaviour is viewed as a trait from the child: 'he/she is born with it') as explanations for problem behaviour. Some parents seemed somewhat reluctant to describe the problems in terms of a genetic cause and therefore described the problems as character. The fourth explanatory model (i.e. 'environment') mentioned in the interviews can be seen as a situational model, since all explanations that fitted within this model presumed that the cause of the problems occurred outside the child.

Five beliefs about the cure of the problems according to parents emerged from the analysis: (1) professional care use (e.g. psychologist, psychiatrist, educationist), (2) use of care offered by school (e.g. social work or extra attention in the classroom), (3) solving the problems by yourself, (4) waiting until behaviour improves (until children 'grow over' the problems) and (5) no cure needed (the problems were not regarded as disturbing).

Ethnic differences in explanatory models and beliefs

Dutch parents mostly mentioned genetic and biological causes as a possible explanation for the problems of their child. The biopsychatric model was most frequently connected with receiving or seeking professional care. The other ethnic groups more often mentioned environmental causes (situational model). The situational model was connected with more varying solutions for the problems of the children. In the Moroccan group, four parents had no idea at all what caused the problems of their child. In the Surinamese group character was also mentioned as an important explanation, besides environment.

Quote 1: "I think that the timidity comes from within. And maybe it is also something she has from me, since I was quiet myself when I was younger. Her shyness comes from within her, it's her character."

(Surinamese mother, daughter >P90 teacher SDQ).

There were also ethnic variations in beliefs about the cure of the problems. For example, using professional care (mental health care or care in school) as a first step, together with an effort of the parents to solve the problems as a second step, were the most frequently mentioned beliefs in the Dutch and in the Turkish group. On the other hand, for some Surinamese and most Moroccan

parents, an opposite pattern emerged: parents mentioned trying to solve the problems themselves as a first step and seeking professional help as a second step.

Quote 2: "I thought that I could manage myself, that I did not immediately need professional help. I started treating him differently. First I yelled a lot; now I talk more. I think yelling is not effective. He is doing better now: sometimes he's still a bit hyperactive, but he is less pre-occupied with himself."

(Moroccan mother, son >P90 parent SDQ).

We also investigated the interaction between the explanatory models and the belief systems of parents in different ethnic groups. For example, in the Surinamese group both 'waiting until behaviour improves' and 'no cure needed' were the most frequently mentioned beliefs. These beliefs were connected with using 'character' as explanation for the problems of the child. These parents viewed problems caused by the character of the child as a permanent situation that cannot be cured; one must accept it or hope that the problems become less severe over time. Interestingly, in the Surinamese group, the beliefs of waiting for improvement and that no solution was needed were also connected with negative beliefs about professional mental health care. Some parents were afraid that mental health care professionals would interfere in their private lives or that professionals would take their children away from them. These negative attitudes towards mental health care were not expressed by parents from other ethnic groups, but acted as a barrier for some Surinamese parents not to consider professional care as a solution. They rather would not speak about the problems of their child with outsiders since they were afraid of the consequences.

Quote 3: "All that he needs right now is to become somewhat less hyperactive. But if you turn to a mental health service like Youth Care, and things go wrong, he could be removed from home. If that happens, you will never forgive yourself."

(Surinamese mother, son with >P90 teacher SDQ).

EXPLORING DETERMINANTS OF HELP-SEEKING: IMPLICATIONS FOR FURTHER RESEARCH AND POLICY

The face-to-face interviews of approximately one hour offered parents a strong feeling of confidentiality, and stimulated them to reflect thoroughly on their experiences with their children and the help-seeking process. The interview also allowed the interviewer to ask for clarification or interpretation when answers showed inconsistencies. Often by the end of the interview, parents mentioned very intimate emotions, such as a fear for losing their child. Would we have been able to collect a similar quality and information in such a detail with a quantitative approach? We doubt it. Yet, we also acknowledge the limitations of our qualitative study, among others that we could not study a large, representative study population.

By using qualitative interviews that gave parents the opportunity to reflect on their motives and opinions of care use, we demonstrated that psychological concepts, like explanatory models and belief systems are important determinants of help-seeking behaviour. Further, the results show why explanatory models and beliefs are important in the help-seeking process and how they influence this process differently in various ethnic groups. The low mental health care use in ethnic minority children seems to be related to the parental attribution of problems to situational factors. The situational explanatory model was not strongly connected with the belief that mental health care is the most appropriate way to solve problems. For ethnic minority parents, school was an important facilitator in solving the problems and receiving help. This could be an important implication for policy: in contrast to the United States, mental health care in the Netherlands is very little provided at schools. In a recent national debate, however, policy makers advocated integration of mental health care facilities in schools and training of teachers to support children with problem behaviour. This constitutes an opportunity for ethnic minority children to receive more mental health care, provided by schools, in a more informal way than the Dutch health care system currently allows.

CONCLUSION

In summary, qualitative studies can help psychiatric epidemiology at many levels, from enlightening reasons why few children with mental health problems receive mental health care, to implicating specific practical interventions to reduce the unmet need for care of ethnic minority children. Qualitative research, however, has its limitations. The qualitative approach cannot be used in large, representative populations since it is very time- and labour consuming. Further, the breadth of the qualitative research approach and the nature of its insights do not readily lend themselves to summarising and evaluating outcomes in a way that quantitative research can. Therefore, qualitative and quantitative research need each other. Quantitative research can identify differences between groups, whereas qualitative research can indicate in more detail why these differences exist. However, it can also be the other way round: inductive qualitative research can explore a phenomenon, and provide quantitative research with hypotheses to be tested in larger, representative patient populations.

Consequently, we advocate more and better integration of quantitative and qualitative methods in the field of modern psychiatric epidemiology. By combining and fitting both methods into an empirical cycle, these methods can be mutually beneficial as they, because of their specific focus, can provide each other with alternative research questions. We need to move from a debate in epidemiological research papers that focuses mainly on quantification, towards a more creative approach of combining research questions which focus on the numbers with research questions that focus on the reasons for the underutilisation of child mental health care. We should acknowledge that a mix of quantitative and qualitative methods is the prime way to maximise our research endeavours. Only then, empirical research can really contribute to policy changes.

Chapter 7

General discussion

GENERAL DISCUSSION

There is an ongoing debate about whether all children with emotional and behavioural problems should receive care for their problems and if yes, which care. Some studies show us, for example, that specialist care use for emotional and behavioural problems is quite low among all children regardless of their ethnic background [29, 70, 91], while other studies show us that such care use is even lower in children from ethnic minority groups [30-32]. However, findings in literature are still inconclusive, especially for young children, so one could wonder: 'Do these ethnic differences also exist in a country with a well-organised preventive health care system as the Netherlands?'. One could also wonder: 'If there are ethnic differences, what causes these differences in care use?'. In this thesis we addressed these questions by describing ethnic differences in pathways in care after signalling emotional and behavioural problems in 5-6-year-old children.

We showed that, in a preventive care setting, ethnic differences in specialist mental health care use exist (chapter 2) and that these differences are probably not due to ethnic differences in referral during preventive health assessments (chapter 5). We also showed that, when applying a broad definition of care use, many more children use care than one would expect based on current reports in literature, which are usually only focused on specialist mental health care use (chapter 3). Furthermore, we showed that whereas ethnic minority parents have a lower problem perception than ethnic majority parents (chapter 4), these differences do not lead to less referral of ethnic minority children in a preventive care setting (chapter 5). With qualitative interviews, we explored parental explanatory models about the cause of the problems and beliefs about the possible cure of the problems as important determinants of care use that showed to differ by ethnicity (chapter 6).

In general, the outcomes described in this thesis stress the importance of describing and explaining ethnic differences in a young age group. To do this, we need the broadest research toolkit we can get. To grasp the true meaning of ethnic differences in pathways in care and to give valuable suggestions to practice, we, as researchers, need to combine quantitative measures with qualitative measures. We need an unremitting critical view when we decide which definitions are used to describe determinants of care use. And we especially need not to forget to tailor our research in such a way that its results can be used in practice. In the general discussion concluding this thesis, we will discuss three important challenges for future research, based on the results and experiences of our study. First, we discuss the importance of including ethnicity as factor in investigating the different stages of help-seeking behaviour. Second, we discuss how conclusions are affected by varying definitions of unmet need for care and care use. Third, we will discuss the potential of applying a mixed method approach in research on help-seeking behaviour. After this we will describe the limitations of our study, since Oscar Wilde once stated: "We should treat all trivial things in life very seriously, and all serious things of life with a sincere and studied triviality" [140]. We will conclude with practical recommendations for professionals and policymakers in the field of child mental health care.

A MATTER OF FACT: THE IMPORTANCE OF EXPLAINING ETHNIC **DIFFERENCES**

Summary of findings

To provide a rationale for this study, it was important to explore if ethnic differences in care use actually exist in young school-aged children. Therefore, we started our research investigating the fourth and last level in Goldberg and Huxley's Levels and Filters model [33-35, 140]: receiving professional care for mental health problems. The results of this thesis confirm previous findings concerning ethnic differences in specialist mental health care use of young children with emotional and behavioural problems [30-32]. Sixteen percent of Dutch children with emotional and behavioural problems in our sample used specialist mental health care, whereas only 7% of Surinamese/Antillean children with emotional and behavioural problems received specialist care, 3% of the Turkish/Moroccan group, and 6% of children with other ethnicities. Our findings are in line with other Dutch studies, that show that – older – Moroccan and Turkish children were the least likely to receive professional care [32] and that the Surinamese group differs the least from the Dutch group regarding specialist service use [141]. These ethnic differences in specialist care use could not be explained by socioeconomic disparities between ethnic groups.

Our finding that ethnic differences in specialist mental health care use exist in a group of 5-6-year-old children with emotional and behavioural problems, underlines the importance to gain more insight in the stages of help-seeking that precede care use, such as problem recognition and the decision to consult a professional, which is the first filter in the Levels and Filters model [33-35]. We showed that parental problem perception was lower in Antillean, Moroccan and Turkish parents than in Dutch parents. These differences could not be attributed to socioeconomic disparities between ethnic groups. Perceived need for professional care did not differ across ethnic groups. As parents can be regarded as the main gatekeepers for access to professional care for emotional and behavioural problems [37], low problem perception in ethnic minority parents may lead to their children receiving less professional care than Dutch children [44]. Besides being essential for seeking care for problems, parental problem perception and perceived need for care influence whether the child health professional (CHP) detects emotional and behavioural problems in children [49].

After exploring the first filter of the Levels and Filters model, we continued exploring the second and third filter of the model: problem recognition and referral by a professional (in a preventive care setting). Based on the lower problem perception of non-Dutch parents, we expected ethnic differences in referral of children screened positive during a routine health assessment with a CHP. However, whereas parental problem perception was an important predictor of referral, we found no ethnic differences in referral rates. Not all Dutch studies underline these findings. In a study by Crone et al. (2010), in which children were preselected based on a high score (>P90) on the Child Behavior Checklist (CBCL), problem identification by a CHP during a routine health assessment was less likely among children of economic immigrant parents than among children of ethnic majority parents [50]. One explanation for these differences could be that in our study we did not assess problem identification by CHP's directly; we only assessed the differences in referral by CHP's. The referral rate in our study was quite low (14%) in comparison

to results from another study on routine health assessments in the Dutch preventive care system [126]. Findings on pathways in care (chapter 3) show that referral by the preventive care system is not the most common route to professional care. Thus, the majority of children who receive professional mental health care were referred to professional mental health care through other sources (for example, the general practitioner). Ethnic differences in referral may exist in these pathways in care. We had no access to information on the source of referrals besides those of the preventive care system.

Interpretation and future research

To increase our understanding of ethnic differences in child mental health care use, we investigated the process of help-seeking for emotional and behavioural problems in children. By using Goldberg and Huxley's Levels and Filters model [33-35] as a framework, we were able to investigate help-seeking as a process including various stages and we were also able to determine important factors in the process of help-seeking behaviour for young children from different ethnic groups. In this way, our study showed that the Levels and Filters model can be used in a multi-ethnic population. Furthermore, our results confirm the essence of this model, namely that administering a signalling measure is not the endpoint in detecting problems but is, in fact, the beginning of a process to identify children with problem behaviour, to connect them successfully with appropriate assessment and treatment, and to monitor and support the child and family over time [56]. We extended previous findings on ethnic differences in pathways in care [30-32] by showing that these differences already exist in the youngest school-aged children. However, it seems that not all filters of the Levels and Filters model play an equal role in describing and explaining ethnic differences in care use in a preventive health care system. We found less ethnic differences in the help-seeking process of young children with emotional and behavioural problems than we expected beforehand. Ethnic differences only appeared on the first and last level of the model. As regards the first filter, it may be that the concepts of problem perception and perceived need for care have a stronger interdependency for ethnic minority parents. While we expected these ethnic differences in parental problem perception to be indicative of a lower referral in ethnic minority children, no ethnic differences in referral by preventive care child health professionals, the third level of the model, were found. It may be that the lower problem perception in ethnic minority parents of the youngest school-aged children does therefore not constitute a barrier in the other phases of the help-seeking process. On the other hand, it could be that ethnic differences in parental problem perception, although not directly influencing the view of the professional, influence the pathways in care after referral of the child to professional care. Future studies should therefore also address in more detail the potential consequences of the lower problem perception in ethnic minority parents for the later stages of help-seeking. Furthermore, research on the influence of ethnicity on referral by other gatekeepers, such as general practitioners or school psychologists, can extend our findings on the role of problem perception in the first level of the Levels and Filters model.

Our findings are suggestive of a difference between ethnic minority children and ethnic majority children in the process from referral to specialist care. It remains unclear how this trajectory develops for ethnic minority children and why less ethnic minority children receive specialist

care after referral by a CHP compared to ethnic majority children. Do all parents experience the referral as useful or do they feel that the acknowledgment of the problem is sufficient in itself? Another question that can be asked is what determines that parents do or do not take the next step from referral to actually receiving care? Do parents, for example, experience barriers in the access to professional mental health care? Or are ethnic majority children perhaps referred too often to specialist care? If we consider that all children deserve an equal opportunity to receive appropriate care and support that is consistent with their needs, ethnicity is a factor that we under no circumstances may ignore. Future research should investigate factors that influence the process from referral to professional care for different ethnic groups, including the role of the lower problem perception in ethnic minority groups, barriers in access to mental health care, differences in care preferences and potential communication problems.

UNMET NEED FOR CARE: THE IMPORTANCE OF CONSCIENTIOUS DEFINING

Summary of findings

The phenomenon of few children using specialist child mental health care for their emotional and behavioural problems has often been described in literature [29, 37] and has become an important political topic in the Netherlands. In recent years, the budget spent on child mental health care has increased, as well as the number of people who work in child mental health care [142, 143]. Whereas there has been an increase in the use of specialist child mental health care in the Netherlands between 2001 and 2010 [114], policy makers still debate if enough children receive specialist mental health care. In the results described in this thesis, indeed only 9.2% of children with emotional and behavioural problems receive specialist mental health care within 24 months after signalling. However, when we define care use as broad as possible, comprising four different sources of information reporting on care use (i.e.: teacher report, Electronic Child Records, records from Youth Care and information from the Psychiatric Case Register Rotterdam-Rijnmond), 42% of the children used care before or after signalling and 69% of the children received formal support before or after signalling.

Other important concepts that are heavily dependent on the definition used, are 'problem perception' and 'perceived need for professional care', which are important determinants of care use [29, 89, 144], and which differ by ethnicity [46, 48, 92]. It is important to include measures of problem perception and perceived need for professional care into research on help-seeking behaviour for young children [43]. In most previous studies problem recognition (including problem perception and perceived need for care) is measured as a high score on a screening questionnaire or diagnostic interview [38]. However, this does not imply that parents also perceive the behaviour of their child as problematic and consider professional help (subjective problem perception). In our study, we found a large discrepancy between subjective problem perception by parents when asked directly through a questionnaire ('Do you think your child has a problem?') and problem perception as determined by a high SDQ score. Only 63% of the parents of children with a high

SDQ score found their child had a 'problem' and only 23% of parents thought that professional care was warranted to solve their problem.

Interpretation and future research

The discrepancy between problem behaviour scores and 'subjective' parental perception of problems has important consequences for other definitions, in particular for the definition of 'unmet need for care' (i.e. needing professional care, but not receiving it). In studies so far, 'unmet need for care' is typically defined as the presence of symptoms, sometimes in combination with impairment, without a concurrent report on specialist mental health care utilisation [97, 98]. Often, a large 'pool' of children with mental health problems, who remain unrecognised and untreated [39, 145], is identified. This phenomenon is by some called a 'new hidden morbidity' [39, 135]. However, these studies do not take into account that, while emotional and behavioural problems may exist, parents not always perceive these as problematic, or consider these a reason for a need for care, as clearly demonstrated by our study. Furthermore, while a need for care may exist, there might not be a need for specialist mental health care. So, not only the definition of need for care matters for studies on ethnic differences in care use, also the definition of care use is important. Most studies assume unmet need for care in children with emotional and behavioural problems, based solely on low rates of specialist professional mental health care use in these children. Other, 'non-specialist' professional services, for example educational support services, are often not taken into account. Yet, 'non-specialist' professional services are the most commonly used form of care for problem behaviour in school-aged children [70, 99] and are often preferred by care-givers over specialist mental health services [100]. Additional studies are needed to fully explore the entire scope of care, support and monitoring for children with emotional and behavioural problems. Further, it is important to consider family and social circumstances in addition to the presence/ absence of psychopathology, as these can additionally determine the individual needs of children with problem behaviour.

In our study, to define how many children were 'in the picture' of professionals, we deliberately considered either care use as encompassing professional care only, and care use as also including formal support, such as monitoring by a school care network. In the Netherlands, professional care use through specialist mental health care in the preventive care system itself or through a professional associated with school, is not the only way to receive care. An extensive child monitoring system, in which a child is monitored from birth until 19 years old, is also available. School care networks are a part of this monitoring system [114]. In the Netherlands, it is pursued that children with problem behaviour who do not receive professional care, should be in the picture of a professional, who can take action if warranted. Our data support the rationale behind this policy, as 92% of the children for whom teachers consistently (over two years) reported a need for care, were monitored by school networks or actually received care for their problems.

It seems reassuring that in the presence of consistently reported perceived need for care by teachers over 2 years, 92% of the children either receive care or are monitored by school care networks, and partly it is. It shows that many more children are in the picture of professionals than is assumed by other studies, which are not always based on accurate and well-considered definitions of unmet need for care. However, we should be cautious when restricting the amount

of children with unmet need for care, or else we may miss out on children with problem behaviour for whom a need for care exists but for whom parents do not report their need for care, for example out of embarrassment, fear of stigmatisation and/or anxieties about criticism on their upbringing of the child [74, 146, 147]. Furthermore, some children with problem behaviour for whom a need for care is not apparent at the moment of signalling problems, may still benefit from being offered preventive, easily accessible care to stop the problems from getting worse. Therefore, I advocate the inclusion of subjective measures of perception of problems and 'need for care' when investigating pathways in care for children with problem behaviour, without losing the individual needs of children out of sight in daily (preventive) practice. Furthermore, we should acknowledge another challenge that the lack of standard measures of 'need for care' brings about: the challenge to create definitions that are culturally tailored and that can be used in practice. Such measures should be at the heart of a public health approach to child mental health care. Future research could explore, for example, if the lower use of specialist mental health care by ethnic minority children signals an unmet need for care, or that these children receive adequate support through other sources of care. Such research should also address the question if the child mental health care system as we know in the Netherlands, is appropriate and effective for children with problem behaviour from all ethnic groups. Several prevention programs and interventions supported by empirical evidence, which are used for children with problem behaviour, have not been cross-validated with ethnic minority groups [24]. Future treatment effect studies on (preventive) interventions for young children with problem behaviour should take ethnicity into account as an important factor.

DESCRIBING PATHWAYS IN CARE: THE IMPORTANCE OF A MIXED METHOD APPROACH

Summary of findings

In studying pathways in care and determinants of these pathways, we combined quantitative methods and qualitative methods, and we combined data from multiple sources (parent report, teacher report, and health care records). In this paragraph we summarise the results of the qualitative component of our study, through which we could research more complex determinants of the help-seeking process, such as explanatory models in different ethnic groups about the cause of problems and beliefs about the cure for the problems. We also discuss the usefulness of combining data from different sources in one research project.

Using qualitative interviews, our study showed that ethnic minority parents more often mentioned environmental and situational causes for the problems of their children, whereas Dutch parents more often mentioned genetic and biological causes. Situational models are less often associated with using professional mental health care as solution for the problems [53]. For example, Surinamese parents more often opted for waiting for improvement as a way of dealing with emotional and behavioural problems in their child and sometimes felt the problems needed no solution at all; they accepted their child's problems as part of its character. These beliefs sometimes coincided with negative convictions about professional mental health care. Our qualitative

study also revealed ethnic differences in care preferences. For ethnic minority parents, school is a more important facilitator in solving the problems and receiving help than for Dutch parents.

In addition to combining quantitative methods with qualitative methods in this thesis, we also combined data from different information sources. First, we combined parent report and teacher report of emotional and behavioural problems. This showed that agreement between parents and teachers was quite low (only 98 children had a high SDQ score according to both their teacher and their parent). This finding is consistent with a large body of literature on informant discrepancies [73, 74]. Whereas discrepant ratings of emotional and behavioural problems of different informants are highly prevalent in all age-groups and across ethnicity, it is important to combine perceptions of as many informants as possible. These inter-rater differences can reflect both perceptual bias [75] or true differences in the problem behaviour of children across settings [76]. We also combined information on care use for problem behaviour in young children from four different sources: teacher report, Electronic Child Records, records from Youth Care and information obtained from the Psychiatric Case Register. We showed that little overlap exists between these sources.

Interpretation and future research

Epidemiological research - using primarily quantitative methods - has so far not been able to provide convincing explanations for ethnic differences in mental health care use. In spite of equal access to mental health care being a priority on the global health agenda and much quantitative research into this issue, ethnic differences in mental health care use still exist. I argue that quantitative research methods alone are not adequately equipped to answer the question why ethnic minority children use less specialist care for emotional and behavioural problems. Qualitative research is another way to address research questions aimed at discovering and describing social and cultural phenomena in specific situations or settings.

In this study we demonstrated, through qualitative research methods that gave parents the opportunity to reflect on their motives and opinions of care use, that psychological concepts such as explanatory models and belief systems are important determinants of help-seeking behaviour. The results show why explanatory models and beliefs are important in the help-seeking process and how they influence this process differently across various ethnic groups: the low mental health care use in ethnic minority children seems to be partly related to the parental attribution of problems to situational factors. The situational explanatory model was not strongly connected with the belief that mental health care is the most appropriate way to solve problems. These findings may all play a role in explaining ethnic differences in specialist mental health care use for children. There are indications that more ethnic differences in care use exist in specialist care, than in primary care [85], which may be partly explained by our findings that ethnic minority parents prefer care outside the mental health care system, such as care provided by school or informal care, and that in some of them negative beliefs about specialist care exist. This is in line with previous studies that have suggested ethnic differences in parents' attitudes towards mental health care services [86], and less positive expectations in ethnic minority groups about specialist child mental health services [87].

The face-to-face interviews that we conducted in our study offered parents a strong feeling of confidentiality, and stimulated them to reflect thoroughly on their experiences with their children and the help-seeking process. The interview also allowed the interviewer to ask for clarification or interpretation when answers showed inconsistencies. Often by the end of the interview, parents mentioned very intimate emotions, such as a fear for losing their child. Would we have been able to collect a similar quality and detailed information with a purely quantitative approach? I doubt it. Yet, we also acknowledge the limitations of our qualitative study, namely among others that the interviews and the research were carried out by the same person. This could have (unintentionally) led to suggestive questions during the interview. Furthermore, a face-to-face conversation with an interviewer may lead to more parents giving answers they deem socially desirable. Finally, we could not study a large, representative population. Thus the next step should be to study these complex determinants also quantitatively, in large representative study populations. I advocate that methods should be combined this way; in an empirical cycle, in which quantitative research provides research questions for qualitative research and vice versa. Only then, empirical research can really contribute to answering the question why ethnic differences in mental health care use exist and how these differences can be addressed.

When discussing the use of mixed methods, we must also acknowledge the added value of combining different quantitative methods, such as parent and teacher questionnaires and record and register information, in studies on pathways in care. Given the small overlap in information on care use provided by the different sources in our study, we may conclude that to adequately describe pathways in care we should not rely on just one source of information. Only by combining all measures, we were able to provide a broad overview of the different sources of care that are available to young school-aged children with emotional and behavioural problems.

METHODOLOGICAL CONSIDERATIONS: THE IMPORTANCE OF BEING **EARNEST**

A main strength of our study is that we had access to data from a large, representative sample of young school-aged children with parent and/or teacher report of the SDQ. From this sample we selected a large group of children with emotional and behavioural problems and we could follow them over time through several records and registers. This study was the first to combine electronic child records from the preventive care system, records from Youth Care and information available from the Psychiatric Case Register. Furthermore, we combined quantitative and qualitative measures to provide an as broad as possible overview of the ethnic differences in pathways in care and the determinants of these differences. In the next sections the study's methodological considerations will be discussed.

Internal validity

Different sources of bias can be a threat to the internal validity of the studies described in this thesis. The first possible limitation to consider is that cultural differences could account for different responses to the questionnaire, which could have biased our results. Questionnaires were

translated into Turkish and Arabic, but we did not provide any further interpretation services. However, the total difficulties score of the parent and teacher SDQ showed to be valid and reliable for all ethnic groups [148]. Second, among parents non-response on the SDQ was more likely when children had an elevated score on the total difficulties scale of the teacher SDQ. This may mean that we missed some parents with children with very high SDQ scores. This may have led to an underestimation of problem perception, perceived need and care use in our sample. However, the effect size was small (Eta=0.11) and the possible influence on the mean scores was therefore probably small as well [148]. Furthermore, teacher's non-response was higher when children were Dutch. Dutch parents reported lower total difficulties scores than non-Dutch parents, but non-response in teachers was not lower when parents reported lower SDQ scores (p=0.81) [148]. Therefore, also for teacher report we do not expect that non-response strongly influenced the internal validity. Third, the response on the follow-up teacher questionnaire was only 41%. Children from whom we had no information available at T2 had a higher impact score, a higher perceived need for care as reported by teachers, and were more often monitored by school care networks at T1. This may mean that care use is underestimated in our sample, since we missed some of the more severe cases, which children we think are more likely to have used care. While response was low, we could not investigate the role of SDQ score, problem perception and perceived need on care use 18 months later (chapter 3), but we had to limit ourselves to only describing pathways in care.

External validity

External validity refers to the generalisation of the results. First, we must consider the generalisability of our findings to other cities and to older age groups in the Netherlands. Most of the Turkish, Moroccan, Surinamese and Antillean children in the Netherlands live in large cities, especially in Rotterdam, Amsterdam and The Hague. In line with our study, studies conducted in other large cities in the Netherlands, be it in somewhat older age groups, also showed ethnic differences in pathways in care [32, 50, 149, 150]. Therefore, we expect that the findings of our study probably also apply to other ethnic minority children in the Netherlands. However, we must consider that in the more rural areas in the Netherlands, ethnic minority children are underrepresented when compared to large cities. Based on our finding that ethnic minority children less often use specialist care after signalling emotional and behavioural problems, care use may be higher in rural areas than in a large, multi-cultural city, on which our study focused. Furthermore, CHP's working in preventive care in large, multi-cultural cities in the Netherlands are more familiar with working with children and parents from various ethnic backgrounds than CHP's in the more rural areas are. Therefore, CHP's in cities may be better equipped to respond to lower parental problem perception in ethnic minority groups. Second, we must consider the generalisability of our findings to other countries. Characteristics of the Dutch health care system may limit generalisability of the results found in this study. Utilisation of mental health care services is largely independent from financial constraints, as in principle all Dutch children are covered by public or private health insurance. Furthermore, the Dutch preventive care system offers publicly funded preventive programs for all children from birth to 19 years. As part of this system, more than 90% of all children undergo 3 to 4 routine health assessments by a CHP during

their school careers. The findings and help-seeking model explored in this study may therefore not be directly applicable to nations in which financial constraints hamper the availability of care, or where mental health care is accessible without referral. Nevertheless, our findings are in line with international studies into ethnic differences in pathways in care and underline the importance of exploring help-seeking models in other countries [37]. Fourth, before we can make definitive assumptions about the role of ethnic differences determinants explored by the qualitative interviews, such as ethnic differences in explanatory models and beliefs, we need to confirm our findings in a large, representative sample.

Reliability

In this paragraph we will discuss some issues with regard to the reliability of the results of this study. First, the Electronic Child Records (ECR) are yet of limited usefulness for research purposes. CHP's registered data for care purposes and not for research purposes. Consequently, many open fields in the records had to be coded manually, before a quantification of the referral decisions of the CHP's was possible. Second, the data of the Psychiatric Case Register were linked to the children with high SDQ scores using the probabilistic linkage method [84], including the first two letters of the last name, date of birth, gender, country of birth, and partial postal codes as identifiers. Using this method, linkage failures due to spelling variants are reduced. However, some identity errors may have still have occurred. The record data from Youth Care were linked to the children with high SDQ scores using a comparable method. Third, the registry and record information used in this study was available for the Rotterdam-Rijnmond area only. We may have missed children who went to school in Rotterdam, but received care for their problems outside this region. Furthermore, there may have been some loss to follow-up through migration out of the register covered by the records and registers.

RECOMMENDATIONS

It seems unlikely and it is probably undesirable that specialist mental health services can expand to work directly with every child with emotional and behavioural problems in the near future. Parents may prefer easily accessible care, to avoid the (perceived) stigma of a diagnosis for the problem behaviour of their child, and politicians in the Netherlands prefer to cut the costs of specialist care use. We need to come up with innovative ways to provide children with effective care and support their need without relying too much on the specialist mental health care system. It is important to realise that the recognition of difficulties alone can be an important intervention for families, as it might offer them an explanation for their child's problematic behaviour (other than bad parenting). Educational interventions may improve the confidence and skills of other professionals not directly involved in the specialist mental health care system, to provide support for children with emotional and behavioural problems. Furthermore, the Youth and Family Centres, as we know in the Netherlands, have been established as 'community centres' to provide easily accessible care and support for parents and their children. Unfortunately, these centres are not yet used to their full potential by parents. Media report on parents avoiding the

Youth and Family Centres, partly because of an image problem the centres struggle with [151, 152]. Therefore, we must remove barriers to treatment and reshape the universal approach for supports and services for children with emotional and behavioural problems and their families, in such a way that these services will instill in parents the confidence to use them in the way they were meant to be used from the outset. In the next sections I will offer suggestions how we could proceed to achieving this goal.

Care provided by schools

In contrast to for example the United States, specialist mental health care in the Netherlands is very little provided by schools. Although the threshold to use mental health care for young children has lowered in the Netherlands, many parents still prefer to seek help within a familiar context for their children; teachers, nurses and school psychologists [94]. This could be one of the reasons why approximately 90% of the children in our study did not receive specialist care, but why 69% of the children did use some form of formal support (including use of school care and school care networks). Following a recent national debate, however, a law has come into force that regards the integration of mental health care facilities in schools and training of teachers to support children with problem behaviour ('Wet Passend Onderwijs'). Parents and teachers together can decide which facilities and support is needed for the child and how this is integrated in its education plan. The notion behind this development is that children with problem behaviour can receive care in the usual school setting, without having to be referred to special education. However, the expertise of a mental health care professional is often also required to decide which support is needed for children with emotional and behavioural problems. Therefore, the 'Wet Passend Onderwijs' calls for an optimisation of the exchange between schools, the preventive care system and the child mental health care system. In the Netherlands another recent development is the decentralisation of youth care. This decentralisation should also lead to more flexible and close to home support for children with emotional and behavioural problems. According to our findings, these developments seem favourable for most parents of children with emotional and behavioural problems. Our research showed that for ethnic minority parents, school is an important facilitator in solving the problems and receiving help. The integration of a child mental health care setting in schools, therefore, constitutes an opportunity for ethnic minority children to receive mental health care in a more informal way than the Dutch health care system currently allows. Furthermore, school care could mitigate the need for future (specialist) intervention. However, we must remain aware that children with severe problems should still receive the most adequate care for their problems. 'Passend Onderwijs' may not be the most adequate solution for all children. Some children will be better off in specialist care settings.

Stepped care

The findings described in this thesis underline the importance of not just mental health care professionals, but all professionals working with children, particularly teachers, to possess basic skills in the identification and management of (less severe) difficulties. Furthermore, a finely tuned structure of collaboration between all professionals working with children must be established, and teachers must possess adequate knowledge about access to more specialised services for the

children they cannot manage themselves. For example, non-mental health professionals could be trained to identify children with psychiatric disorders and facilitate families in helping their child through the use of appropriate therapy programs. In our qualitative interviews, parents indicated a preference for easily accessible care facilities in familiar surroundings. An appropriate solution to meeting parents' wishes, while at the same time being sensitive to the individual needs of the child may be a 'stepped-care' model [153], according to which a child with emotional and behavioural problems first receives low threshold care in familiar surroundings (such as at home, in a community centre and/or at school). Children who cannot access or do not respond to this approach, could then be referred to specialist mental health care.

Such a stepped care approach could be easily implemented in the Netherlands, as the Youth and Family Centres already use a method after signalling emotional and behavioural problems in children which is largely correspondent with the basic principles of stepped care. The five functions of the Youth and Family Centres are: providing information and advice, signalling problems, assisting in parents in the process of help-seeking, providing light pedagogical support and coordination of care [154]. When specialist care is needed, the Youth and Family Centres can function as an intermediary on behalf of the child and they can provide assistance to the parents in this process. Furthermore, a collaboration between schools and the Youth and Family Centres is embedded in the school care networks. CHP's working at these centres can share their knowledge about the child with the (internal support) teacher of the child and other professionals. In this way, all children with emotional and behavioural problems are 'in the picture' of professionals, who share their expertise amongst each other. Through intensive contacts, these professionals can provide support for children with emotional and behavioural problems that is better tailored to the specific needs of the child. However, due to bureaucratic hassle, a low 'brand awareness', a tarnished image and the fact that the Youth and Family Centres are often confused with the specialist youth health care system (i.e. Youth Care and the child mental health system), parents often do not consider these centres to be a viable opportunity for the easily accessible, trusted (stepped) care they desire [151]. Therefore, we should strive to restore and reinvigorate the Youth and Family Centres in such a way they will be used by parents as they were meant to be used from the outset.

Improving the image of child mental health care

It is worrisome to notice that some parents showed a fear that mental health care professionals would interfere in their private lives or even take their children away from them. Parents who feel afraid or ashamed about their child's problems, may fear negative consequences for their child or have a fear of stigmatisation, may be less likely to use mental health care [122]. These fears seem more and more prevalent in Dutch society, not only for ethnic minority parents. Dutch newspapers report on parents being 'afraid' of CHP's and Youth Care, and that these parents regard preventive health care systems as an 'investigation service' for child abuse [151, 152, 155, 156]. After some serious incidents of child abuse, preventive care has become more and more alert on problem behaviour and bad parenting. Being alert is not a negative development per se, but we must be sensible about this development in connection to possible barriers parents may experience with regard to the process of seeking mental health care for their children. Therefore, (qualitative) research should be conducted to explore the consequences of these fears in parents.

Such negative beliefs about mental health care institutions may influence the willingness of parents to share the problems of their child with CHP's or influence the degree in which referral for these problems is accepted by parents. Furthermore, parents may be better educated about the legal safeguards that determine the limits of possible actions that professionals in the child mental health care system can take when performing their jobs. For example, medical confidentiality applies not only to health care professionals and psychiatrists, but also to psychologists [157]. In this way, parents may be reassured that CHP's cannot take measures that invade family life, unless there are serious indications that the child's safety is in immediate jeopardy.

Cultural differences in daily practice

Ethnic differences in pathways in care for young children with emotional and behavioural problems exist. Therefore, services that provide support and organise care for these children must be culturally competent. Service providers must be trained in specific competences which help them recognise and adequately deal with the ethnic and cultural idiosyncrasies of individuals and groups, whose cultures are different from those associated with mainstream culture. For example, professionals in child mental health care should take into account the respective interpretations of problem behaviour of ethnic majority and ethnic minority parents. Even though these differences might not directly lead to differences in referral, they can inhibit communication during the routine health assessment and constitute a barrier with regard to the trajectory of care to follow. Furthermore, professionals should be aware of the different interpretations of the causes of problem behaviour and the different beliefs about the appropriate cure of problem behaviour across ethnicities. Some ethnic minority parents may benefit from education by a professional about the benefits child mental health care can offer their child and themselves in dealing with its emotional and behavioural problems.

CONCLUSION

Seeking help for young children is a process that is hard to describe, because the concerning decisions are highly shaped by individual preferences and beliefs and are influenced by many determinants. These difficulties are reflected in reality: whereas offering an equal chance to all children to receive appropriate mental health care is already a goal of current health care policy, ethnic differences in care use are still present. Ethnic differences in problem perception, explanatory models and beliefs, as well as care preferences, may contribute to diverging patterns of care use across ethnic groups. More research is needed to fully assess the reasons behind these ethnic differences. Therefore, we need to establish research that is based on a conscientious definition of key terms regarding the help-seeking process and research that makes use of a combination of qualitative and quantitative research methods. In this way, we can inform practice in which way the provision of adequate care for every child with emotional and behavioural problems, tailored to the specific needs of the child and its parents, is possible. Probably, it is not feasible to eliminate all ethnic differences in mental health care use, and it is debatable if we should. But we definitely should, and can strive to eliminate unmet need for care in all ethnic groups.

Chapter 8

References
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Summary

Introduction

A significant number of young children display emotional and/or behavioural problems. Research has shown that early identification and treatment of these problems in children is possible and can lead to health advantages. Youth care in the Netherlands is ideally positioned to identify these problems at an early stage and to initiate treatment. However, identification in itself is no guarantee for a successful treatment of the problems. To justify screening for emotional and behavioural problems, insight is needed into the pathways in care that follow the identification of these problems. It is important to know which children need which care and if they actually receive this care. Up until now however, little is known about these pathways in care, especially concerning the pathways in health care of ethnic minority groups in the Netherlands. It remains unclear whether pathways in care diverge between children from ethnic minority groups and children from the ethnic majority and, if ethnic differences are found, what are the determinants of these differences.

Research questions

- 1. Are there ethnic differences in specialist mental health care use in 5-6-year-old children with problem behaviour?
- 2. How can we accurately describe pathways in care in 5-6-year-old children with problem behaviour, to determine in which measure unmet need exists within this group?
- 3. Are there ethnic differences in parental and teacher's problem perception and perceived need for professional care in 5-6-year-old children with problem behaviour?
- 4. Do ethnic differences in problem perception and perceived need for care predict ethnic differences in referral at the routine health assessment?
- 5. Do ethnic differences exist among parents with regard to beliefs and explanatory models about their child's emotional and behavioural problems and, if so, how can these differences help us understand why few children receive (specialist) mental health care?

For our research we used data from children in grade 2 (5-6 years old) of primary school in the Rotterdam-Rijnmond region, in which emotional and/or behavioural problems were identified with the "Strengths and Difficulties Questionnaire" (SDQ). All children in grade 2 of primary school in Rotterdam undergo a routine health assessment at a Youth and Family Centre (Centrum voor Jeugd en Gezin). During this assessment among others the results of the SDQ are discussed. This thesis describes the ethnic differences in pathways in mental health care and youth care that followed during the 24 months after signalling problems, for children with a high score on the SDQ (i.e. the highest 10% of SDQ scores). The pathways in care were described with the aid of the Electronic Child Records, registers from Youth Care, the Psychiatric Case Register Rotterdam-Rijnmond and self-reports by parents and teachers. Finally, we investigated the determinants of ethnic differences in pathways in care both at baseline and follow-up (24 months later) through questions to parents and teachers about problem perception and need for professional care. We also conducted semi-structured interviews with a sub-group of parents, to investigate

the role of parental explanatory models concerning the cause of the problems and parental beliefs concerning how the problems should be solved.

Findings

In Chapter 2, we researched whether there are ethnic differences in the use of specialist care in 5-6-year-old children with emotional and/or behavioural problems. Thereby, we pay attention to the influence of the perceived severity of the problems according to both parents and teachers. According to the data from the Psychiatric Case Register, only 9% of children used specialist care 24 months after identification of the emotional and/or behavioural problems through the SDQ. Children from ethnic minority groups received significantly less specialist care than Dutch children. These differences could not be explained by socioeconomic differences across ethnicity. Perceived severity by both parent and teacher were predictive of care use of the children 24 months after signalling the problems.

In Chapter 3, we described, as broadly as possible, care use in 5-6-year-old children with a high SDQ score, as reported by the teacher of the child, up to 24 months after the routine health assessment. The general consensus in scientific literature is that an unmet need for care exists in young children with emotional and/or behavioural problems, because they make very little use of specialist care. In this chapter, we argue why a conscientious definition of 'unmet need for care' is necessary to be able to have a constructive, substantive debate about whether children actually make too much or too little use of care. To define care use as broadly as possible, we used four different sources in which care use is registered: care registered in the Electronic Child Register, specialist care registered in the Psychiatric Case Register, care registered in the registers of Youth Care and care through school as reported by the teacher of the child. When we used this broad definition of care, 42% of children used care before or after a high score on care on the SDQ. When we also include children that received help or were being monitored by a school care network, 69% of children received a certain form of formalised support. When we looked only at children with emotional and/or behavioural problems for which the teacher reported a need for care, both prior to and following the routine health assessment, 92% of children received some form of formalised care. In this way, we show that the definition of the concept of 'unmet need for care' can vary and in which ways future research can chart the need for care and care use in young children.

In Chapter 4, we investigated whether ethnic differences exist in reporting problem perception and need for professional care by parents and teachers of 5-6-year-old children with emotional and/or behavioural problems. Problem perception and perceived need for care are important indicators for care use later in life. Problem perception was found to be significantly higher in parents of Dutch children than in parents from ethnic minority groups. In teacher reports, no differences were found between ethnic groups; however both problem perception and need for care were generally higher in teachers than in parents.

Subsequently, in Chapter 5, we investigated whether the lower problem perception in parents from ethnic minority groups leads to less referral of their children as a consequence of the routine health assessment. We requested information on referral decisions of CHP's from the Electronic Child Records. In total, 14% of children were referred as a consequence of the routine health assessment. Other than expected, no ethnic differences in referral decisions were found. Problem perception in parents and need for care in teachers were both positively associated with referral.

Finally, in Chapter 6, we pay attention to the question why thus far hardly any explanation has been found for ethnic differences in care use in young children. We argue that qualitative research is often better equipped than qualitative research to answer this question. In an exemplary way, through qualitative research among parents of different ethnic groups, we explored two important determinants of care use; parental explanatory models about the problem of their child and parental beliefs with regard to the solution of the problems. Parents from ethnic minority groups interpreted the problems of their child more often from environmental factors and showed a preference for low-threshold care to solve the problems. Dutch parents however, more often cited biological or genetic causes for the problems of their child and showed a preference for specialist care to solve the problems of their child. Some Surinamese parents harboured negative perceptions toward youth health care in the Netherlands. These findings offer a direction for future research and should be replicated in a larger study sample. We advocate integrating qualitative and quantitative methods in scientific research. In an empirical cycle, they can provide each other with research questions. In that way, researchers can finally answer the question why ethnic differences in care use exist.

Discussion and recommendations

In Chapter 7 we summarize the most important findings of the research described in this thesis. We have gained insight into ethnic differences in different stages of the process of help-seeking for young children, in several determinants of ethnic differences in pathways in care and in the ways in which we can adequately shape and execute future research into this issue. For young children with emotional and/or behavioural problems it is important that the road to care is free from obstacles and that these children, irrespective of their ethnic background, have access to the care or support they need. For parents it is important that low-threshold care is sufficiently available and that they have enough trust in the youth health care system to use it to the fullest possible extent. We give suggestions how to achieve these goals in practice. Moreover, to be able in the future to give a definitive answer to the question why ethnic differences in health care exist, we need to set up research that is based on a conscientious definition of the most important concepts in the process of help-seeking. This research should incorporate the power of both quantitative and qualitative research methods. We have to, and can, ensure that all children in the Netherlands with emotional and/or behavioural problems receive adequate care; the care they need.

Samenvatting

Inleiding

Een aanzienlijk aantal jonge kinderen vertoont emotionele problemen of gedragsproblemen. Onderzoek heeft aangetoond dat vroege signalering en behandeling van deze problemen bij kinderen mogelijk is en waarschijnlijk tot gezondheidswinst leidt. De jeugdgezondheidszorg in Nederland bevindt zich in een ideale positie om dergelijke problemen vroegtijdig te signaleren en verdere behandeling in gang te zetten. Identificatie op zichzelf is echter geen garantie voor een succesvol behandelingstraject. Om het screenen voor emotionele problemen en gedragsproblemen te rechtvaardigen, is inzicht nodig in de zorgtrajecten die mogelijk volgen op de identificatie van deze problemen. Het is belangrijk om te weten welke kinderen welke zorg nodig hebben en of ze die zorg ook daadwerkelijk krijgen. Tot nu toe is echter nog weinig bekend over deze trajecten in zorg en vooral over de zorgtrajecten van etnische minderheidsgroepen in Nederland. Het is nog niet duidelijk of tussen kinderen uit een etnische minderheidsgroep en autochtone kinderen de zorgtrajecten in de geestelijke gezondheidszorg en jeugdzorg verschillen en, wanneer er etnische verschillen gevonden worden, wat de determinanten van deze verschillen zijn.

Onderzoeksvragen

- 1. Bestaan er etnische verschillen in het gebruik van specialistische zorg bij 5-6-jarige kinderen met probleemgedrag?
- 2. Hoe kunnen we zorgbehoefte en zorggebruik zo accuraat mogelijk beschrijven in een groep van 5-6-jarige kinderen met probleemgedrag, om te bepalen in welke mate in die groep 'onvervulde zorgbehoefte' bestaat?
- 3. Bestaan er etnische verschillen in de probleemperceptie en zorgbehoefte van ouders en leerkrachten van 5-6-jarige kinderen met probleemgedrag?
- 4. Voorspellen de etnische verschillen in probleemperceptie en zorgbehoefte etnische verschillen in doorverwijzing naar aanleiding van het periodiek gezondheidsonderzoek?
- 5. Bestaan er etnische verschillen in verklaringsmodellen en opvattingen van ouders met betrekking tot het probleemgedrag van hun kind en, zo ja, hoe kunnen deze verschillen ons helpen te begrijpen waarom zo weinig kinderen (specialistische) zorg ontvangen voor emotionele en/of gedragsproblemen?

Voor ons onderzoek gebruikten we gegevens van kinderen in groep 2 (5-6 jaar) van het basisonderwijs in de regio Rotterdam-Rijnmond bij wie emotionele problemen en gedragsproblemen gesignaleerd zijn met behulp van de 'Strengths and Difficulties Questionnaire' (SDQ). Alle kinderen in groep 2 van het basisonderwijs in Rotterdam ondergaan een periodiek gezondheidsonderzoek bij het Centrum voor Jeugd en Gezin. Tijdens dit onderzoek wordt ook de uitkomst van de SDQ besproken. De etnische verschillen in zorgtrajecten in de geestelijke gezondheidszorg en jeugdzorg in de 24 maanden die volgen op de signalering van problemen zijn in dit proefschrift beschreven voor kinderen met een hoge score op de SDQ (d.w.z. de hoogste 10% SDQ-scores). De zorgtrajecten zijn in kaart gebracht aan de hand van het Elektronisch Kinddossier, het register van Bureau Jeugdzorg, het Psychiatrische Casusregister Rotterdam-Rijnmond en zelfrapportage door ouders en leerkrachten. Tot slot zijn de determinanten van de etnische verschillen in zorgtrajecten onderzocht in de baseline en follow-up meting door vragen aan ouders en leerkrachten over probleemperceptie en behoefte aan professionele hulp. Daarnaast zijn semigestructureerde kwalitatieve interviews bij een subgroep van ouders gebruikt om de rol te onderzoeken van verklaringsmodellen naar de oorzaak van de problemen en opvattingen van de ouders over de manier waarop de problemen opgelost dienen te worden.

Bevindingen

In hoofdstuk 2 onderzoeken we of er etnische verschillen zijn in het gebruik van specialistische zorg bij 5-6-jarige kinderen met emotionele problemen of gedragsproblemen. Daarbij besteden we aandacht aan de invloed van de waargenomen ernst van de problematiek volgens zowel ouders als leerkrachten. Volgens de gegevens uit het Psychiatrisch Casusregister, maakte slechts 9% van de kinderen gebruik van specialistische zorg 24 maanden na het signaleren van emotionele problemen of gedragsproblemen aan de hand van de SDQ. Kinderen uit etnische minderheidsgroeperingen maakten significant minder gebruik van deze zorg dan Nederlandse kinderen. Deze discrepantie is niet te verklaren vanuit sociaaleconomische verschillen tussen de etnische groepen. Zowel de waargenomen ernst door de ouder als door de leerkracht was voorspellend voor het zorggebruik van de kinderen 24 maanden na signalering van de problemen.

In hoofdstuk 3 beschrijven we zo breed mogelijk het zorggebruik van 5-6-jarige kinderen met een hoge SDQ-score, gerapporteerd door de leerkracht van het kind, tot 24 maanden na het periodiek gezondheidsonderzoek. De algemene consensus in de wetenschappelijke literatuur is dat er een onvervulde zorgbehoefte bij jonge kinderen met emotionele problemen of gedragsproblemen bestaat, omdat zij zeer weinig gebruik maken van specialistische zorg. In dit hoofdstuk beargumenteren wij waarom het consciëntieus definiëren van het concept 'onvervulde zorgbehoefte' noodzakelijk is om een constructief inhoudelijk maatschappelijk debat te kunnen voeren of kinderen daadwerkelijk te veel of te weinig gebruik maken van zorg. Om zorggebruik zo breed mogelijk te definiëren, gebruikten we vier verschillende bronnen waarin zorggebruik wordt geregistreerd: zorg geregistreerd in het Elektronisch Kinddossier, specialistische zorg geregistreerd in het Psychiatrisch Casusregister, zorg geregistreerd in de dossiers van Bureau Jeugdzorg en zorg gebruikt op school gerapporteerd door de leerkracht van het kind. Bij het gebruik van deze brede(re) definitie van zorg ontvingen 42% van de kinderen voor of na het signaleren van een hoge SDQ-score zorg. Wanneer hierbij ook de kinderen gerekend werden die hulp ontvingen of gemonitord werden door een zorg-adviesteam op school, ontving 69% van de kinderen een bepaalde vorm van geformaliseerde steun. Als alleen gekeken werd naar de kinderen met emotionele problemen of gedragsproblemen waarbij de leerkracht een zorgbehoefte rapporteerde zowel voorafgaand aan het gezondheidsonderzoek als 24 maanden daarna, ontving 92% van deze kinderen een bepaalde vorm van geformaliseerde steun. Op deze manier laten we zien hoe de invulling van het concept 'onvervulde zorgbehoefte' kan variëren en op welke verschillende manieren toekomstig onderzoek de behoefte aan zorg en het zorggebruik van jonge kinderen in kaart kan brengen.

In hoofdstuk 4 is onderzocht of etnische verschillen bestaan in het rapporteren van probleemperceptie en zorgbehoefte van ouders en leerkrachten van 5-6-jarige kinderen met emotionele problemen of gedragsproblemen. Probleemperceptie en zorgbehoefte zijn belangrijke voorspellers van later zorggebruik. Probleemperceptie was significant hoger bij ouders van Nederlandse kinderen dan bij ouders uit etnische minderheidsgroepen. Voor de rapportage door leerkrachten werden geen verschillen tussen de etnische groepen gevonden; wel was zowel de probleemperceptie als zorgbehoefte hoger bij leerkrachten dan bij ouders.

In hoofdstuk 5 is vervolgens onderzocht of de lagere probleemperceptie bij ouders uit etnische minderheidsgroeperingen leidt tot minder doorverwijzing van hun kinderen naar aanleiding van het periodiek gezondheidsonderzoek. Informatie over doorverwijsbeslissingen van jeugdartsen en jeugdverpleegkundigen werd opgevraagd uit het Elektronisch Kinddossier. In totaal werden 14% van de kinderen doorverwezen naar aanleiding van het gezondheidsonderzoek. Anders dan verwacht, werden geen etnische verschillen in de doorverwijsbeslissingen gevonden. Probleemperceptie bij ouders en zorgbehoefte van de leerkracht waren beiden positief geassocieerd met doorverwijzing.

In hoofdstuk 6 is tenslotte aandacht besteed aan de vraag waarom tot dusver nog nauwelijks verklaringen zijn gevonden voor etnische verschillen in zorggebruik van jonge kinderen. Wij beargumenteren waarom kwalitatief onderzoek vaak beter geschikt is om antwoord op deze vraag te geven dan kwantitatief onderzoek. Op een exemplarische manier hebben wij, door middel van kwalitatief onderzoek onder ouders uit verschillende etnische groepen, twee belangrijke determinanten van zorggebruik verkend; verklaringsmodellen over de oorzaak van de problemen van hun kinderen en hun opvattingen met betrekking tot de oplossing van de problemen. Ouders uit etnische minderheidsgroepen verklaarden de problemen van hun kind vaker vanuit omgevingsfactoren en gaven de voorkeur aan laagdrempelige zorg om de problemen op te lossen. Nederlandse ouders daarentegen, noemden vaker biologische of genetische oorzaken voor de problemen van hun kind en gaven de voorkeur aan specialistische zorg om de problemen van hun kind op te lossen. Bij Surinaamse ouders bestonden soms negatieve opvattingen met betrekking tot de jeugdgezondheidszorg in Nederland. Deze bevindingen bieden een richting voor toekomstig onderzoek en dienen gerepliceerd te worden in een grotere steekproef. Wij pleiten voor het integreren van kwalitatieve en kwantitatieve methoden in wetenschappelijk onderzoek. In een empirische cyclus kunnen zij elkaar van onderzoeksvragen voorzien en kunnen wetenschappers uiteindelijk tot beantwoording komen van de vraag waarom er etnische verschillen in zorggebruik bestaan.

Discussie en aanbevelingen

In hoofdstuk 7 vatten we de belangrijkste bevindingen van het onderzoek in dit proefschrift samen. We hebben inzicht gekregen in etnische verschillen in verschillende fases van het proces van hulp zoeken voor jonge kinderen, in een aantal determinanten van etnische verschillen in zorgpaden en in de manieren waarop we dit soort onderzoek hiernaar in de toekomst op een adequate manier kunnen vormgeven en uitvoeren. Voor jonge kinderen met emotionele problemen of gedragsproblemen is het belangrijk dat de weg naar zorg vrij is van obstakels en dat deze kinderen, ongeacht hun etnische herkomst, toegang hebben tot de zorg of steun die zij nodig

hebben. Voor hun ouders is het belangrijk dat laagdrempelige zorg voldoende beschikbaar is en dat zij genoeg vertrouwen hebben in het jeugdgezondheidsstelsel in Nederland om de mogelijkheden hiervan zo volledig mogelijk te benutten. We geven een aantal suggesties om deze doelen te bereiken in de praktijk. Om in de toekomst een definitief antwoord te kunnen geven op de vraag waarom etnische verschillen in zorggebruik bestaan, dienen we daarnaast wetenschappelijk onderzoek op te zetten dat is gebaseerd op het consciëntieus definiëren van de belangrijkste begrippen in het proces van hulp zoeken. Dat onderzoek moet gebruik maken van de kracht van zowel kwantitatieve als kwalitatieve onderzoeksmethoden. Want we moeten en kunnen ervoor zorgen dat alle kinderen in Nederland met emotionele problemen of gedragsproblemen de juiste zorg krijgen; de zorg waar zij behoefte aan hebben.

Dankwoord

Het schrijven van een dankwoord is niet gemakkelijk. Hoewel ik reeds in de eerste maand van mijn promotieonderzoek begon met het bedenken ervan en ik mij de afgelopen vier jaar steeds meer bekwaamde in het schrijven, krijg ik nu, in de laatste week, bijna geen letter op papier. Een wetenschapper vraagt zich dan direct af: hoe komt dat? In ieder geval niet doordat ik niet dankbaar ben; alle hulp die ik kreeg toen ik 'op weg' was, staat me bij en waardeer ik zeer. Het is ook niet zo dat ik te weinig mensen te bedanken heb; dat zijn er zoveel dat ik er, onbedoeld, misschien zelfs een paar vergeet. Waarschijnlijk heb ik dus, het valt me zwaar om te bekennen, last van een alledaags, doodordinair en banaal 'writer's block'. En dat juist nu! Maar ik heb me de afgelopen vier jaar niet door zonderlinge statistiekmethoden geworsteld, telkens opnieuw bonje gehad met het ingenieuze vernuft dat 'Microsoft Word' heet en nachten doorgehaald op zoek naar hét passende woord in die specifieke zin, om me nu te laten kisten door een dankwoord. Lieve lezer, ontken het maar niet: u heeft vrijwel zonder uitzondering deze passage in dit proefschrift als eerste opengeslagen, dus geniet u nu van deze welgemeende dankbetuiging. Het woord moest van ver komen, de dank zeker niet.

Ik heb dit proefschrift geschreven met de hulp van drie uitermate deskundige begeleiders. Van hen heb ik het meest geleerd en daarom is het eerste woord van dank, vanzelfsprekend, voor hen. Mijn twee promotoren: prof. dr. Frank Verhulst en prof. dr. Marianne Donker, bedankt voor het delen van jullie expertise. Ik heb jullie kritische blik, tijdens het hele onderzoeksproces, maar vooral bij het lezen en het becommentariëren van mijn artikelen zeer gewaardeerd. Beste Frank, je zag dat ik hield van schrijven – en je liet me schrijven. Voor mij was dat essentieel. Beste Marianne, onze communicatie geschiedde vooral op afstand, maar dat heb ik nooit als een obstakel ervaren. Jouw inzichten in mijn werk zorgden bij mij meer dan eens voor een 'aha-erlebnis'. Dankjewel! Mijn copromotor, dr. Floor van Oort. Beste Floor, what's in a name? In ieder geval: planmatig, kritisch en georganiseerd werken. Ik kon je altijd en overal om input vragen, soms - vaak - was jouw intuïtie me zelfs voor. Je ontdekte al snel dat mijn talenten niet lagen bij de getallen, maar jouw enthousiasme daarvoor heeft mij toch het nodige statistische 'aanzien' opgeleverd. Door jouw begeleiding was ik in staat om, al schrijvende, een wetenschappelijke mening te vormen. Heel veel dank!

De leden van mijn kleine commissie, prof. dr. Niels Mulder, prof. dr. Karien Stronks en prof. dr. Han Entzinger: bedankt voor het beoordelen van mijn proefschrift. Prof. dr. Niels Mulder wil ik daarnaast bedanken voor het vervullen van de rol van secretaris in deze commissie. Prof. dr. Menno Reijneveld, prof. dr. Fop Verheij en prof. dr. Hein Raat: bedankt voor het plaatsnemen in de grote commissie.

De veertig ouders bij wie ik in de huiskamer (en soms in de keuken!) mocht komen voor een interview: bedankt voor jullie gastvrijheid, de vanzelfsprekendheid waarmee jullie mij ontvingen en dat jullie je persoonlijke verhalen met mij deelden.

De onderzoeksassistenten: Caroline Ruit, Femke Oldenziel en Jitteke van 't Hek: bedankt voor jullie grote inzet bij de dataverzameling tijdens jullie stageperiode. Het uitwerken van één interview duurde gemiddeld tien uur; jullie namen er bijna veertig voor jullie rekening. Ik weet zeker dat jullie na deze ervaring vol overtuiging het kwalitatief onderzoek in de armen sluiten! Esmee Paling en Sorayah Jansen, bedankt voor jullie hulp bij het versturen van de enorme lading vragenlijsten. Radio aan, meezingen en gaan met die enveloppen! Mounir Ouni en Marisa Verbeek, bedankt voor jullie logistieke ondersteuning bij de SDQ-operatie. Mounir, ik vond het fijn om met je samen te werken tijdens mijn interviews. Je was een betrokken tolk en ik denk dat er een groot interviewer in je schuilt.

De coauteurs: dr. Wilma Jansen, dr. André Wierdsma en prof. dr. Hein Raat, bedankt voor het meelezen van mijn artikelen. Beste Wilma, bedankt voor jouw insteek. Fijn dat ik altijd bij je terecht kon met dringende vragen. Beste André, bedankt voor je hulp bij het verkrijgen van gegevens uit het Psychiatrisch Casusregister en voor je hulp bij de statistiek. Jan van der Ende: ook jij bedankt voor het delen van je statistische expertise. Ik kon het goed gebruiken!

Alle collega's bij het EMC: bedankt voor de gezelligheid en steun. Eerst op de Westzeedijk en later op de Wytemaweg, waar ik vaker was. Toen wel verzonken in de laatste loodjes. Maar gelukkig viel er, anders dan de naam doet vermoeden, altijd wel wat te lachen in de 'stille kamer'. Ilse, Lisette en Christina: het was leuk om een tafeleiland met jullie te delen. Naast het uitvoeren van geniaal wetenschappelijk onderzoek hebben we bijna de gehele wereldproblematiek opgelost. Jammer dat ik net te vroeg weg was!

Alle collega's bij de GGD: ik heb het heel erg naar mijn zin gehad! Vanaf dag I werd ik direct wegwijs gemaakt in de ambtelijke gebruiken door het onafscheidelijke trio Cathelijne, Nandani en Carolien. Hoe ga je om met een recycleprullenbak? Hoe zie je aan een eiersalade in de bedrijfskantine of deze nog vers is? Onder welke omstandigheden kan een geit zijn hoofd 360 graden draaien? Later met Alice, Sarah, Vincenzo, Netty en Ingrid op één kamer. En een whiteboard... Deze combinatie bleek helaas niet altijd even goed voor het werktempo. Maar man, wat hebben we er een goed Pubquiz-team aan over gehouden!

Mijn nieuwe collega's bij het VUmc: een proefschrift afronden én een nieuwe baan starten is bijna genoeg reden om delinquent gedrag te vertonen. Gelukkig had ik geen gebrek aan cortisol! Theo en Arne: de academische werkplaats is een prachtige uitdaging, die ik graag met jullie aanga. Reshmi: samen de brug over. Wat fijn dat jij mijn collega bent!

Mijn 'ex-studiegenootjes en nu ook ex-promovendigenootjes' Anja en Brittany: bedankt voor de leuke MENS-borrels. Lieve An en Britt, we riepen het al: die komen in het dankwoord! Ik hoop dat we er nog lang mee doorgaan: ik zorg uiteraard voor de mini-groentes.

Mijn paranimfen: Cathelijne en Ellen, bedankt dat jullie mij durven te flankeren. Volgens de oude gebruiken moeten jullie namelijk ook in staat zijn om mij fysiek te beschermen, mocht de verdediging uit de hand lopen. Gelukkig mag er geen vraag gesteld worden over stelling 11. Lieve Cath, er is er maar één die weet hoe het echt was, dat ben jij. El, lieve maat! Negen jaar geleden mocht ik je schoenen aan. Het zat gelijk goed. Tuurlijk sta jij naast me.

Mijn lieve vrienden en tennisteam: bedankt voor de gezelligheid en jullie van tijd tot tijd broodnodige steun. Lieve Yvonne, we go way back. Jij twee kinderen, ik een proefschrift. En wat als ik twee kinderen krijg? Mijke, Judith en Marloes, lieve psychologievriendinnetjes. Ik ben echt toe aan een weekendje weg: gaan jullie mee? Suzy en Rick, bedankt dat ik Stef en Nadine mocht 'lenen' voor de kaft van mijn proefschrift. Stef en Nadine: nu zijn jullie wereldberoemd! Suus, ik heb heel erg genoten van onze tennisbaanonderonsjes in de laatste hectische maanden. Wanneer verhuis je weer terug naar Rotterdam?

Mijn ('schoon') familie: bedankt voor jullie liefde, interesse en steun. Beste Leo, Froukje en Esben, bedankt voor jullie grote interesse tijdens mijn promotietraject. Leo, fijn dat je trouw de boekenkaternen voor mij bewaart, hoewel ik een leesachterstandje heb opgelopen. Froukje, van niemand kreeg ik zo snel zulke geïnteresseerde vragen over een nieuw artikel als van jou. Esben, I really enjoyed our deep discussions about life, literature and PhD's. To be continued!

Oma, Oma en Opa, bedankt voor jullie interesse (en breezers). Wat fijn dat jullie nog zo kwiek zijn! Lieve Eva, ik heb het liefste zussie en de mooiste kaft van de wereld. Dankjewel!

Lieve paps en mams, jullie geven mij rust. 'Werk je niet te hard, lieverd?' Mam: ik kom nog steeds graag thuis voor een lekker 'prakkie'. Pap: we zijn het niet helemaal eens geworden over stelling 11. Maar wijsheid komt met de jaren.

Natuurlijk tot slot: lieve, lieve Bas! Bedankt dat je er was, bent en blijft. Voor sommige dingen is nu eenmaal (veel) tijd nodig. Maar als men de tijd vervolgens zorgvuldig in acht neemt, ontstaat er vaak iets heel moois! Onze Toby en Sam act is nu echt voorbij. Gelukkig. En toch, misschien missen we het binnenkort wel. Nu eerst naar Oslo en naar Zweth. En daarna...? Dan hebben we tijd in overvloed!

Curriculum Vitae

Floor Bevaart werd op 12 september 1984 geboren in Rotterdam. In 2002 haalde ze haar gymnasiumdiploma aan het Erasmiaans Gymnasium in Rotterdam. In 2003 begon zij met de studie psychologie aan de Erasmus Universiteit in Rotterdam. Tijdens haar studie heeft zij gekozen voor de afstudeerrichting onderwijs- en ontwikkelingspsychologie. Haar afstudeerscriptie schreef zij bij het IVO over compulsief online gamen bij jongeren. In het najaar van 2008 studeerde zij af. Van februari 2009 tot augustus 2012 heeft zij bij het Erasmus Medisch Centrum, op de afdeling Kinder- en Jeugdpsychiatrie, gewerkt aan haar promotieonderzoek, waarvan de bevindingen zijn beschreven in dit proefschrift. Vanaf oktober 2012 is ze werkzaam bij het VU Medisch Centrum als postdoc-onderzoeker en coördinator van Academische Werkplaats bij De Nieuwe Kans in Rotterdam. Hier coördineert zij een onderzoek naar de effectiviteit van een forensische dagbehandeling voor jongvolwassenen tussen 18 en 27 jaar.

PhD portfolio

Summary of PhD training and teaching activities

Name PhD student: Floor Bevaart PhD period: 02/2009-08/2012

Erasmus MC Department: Child and Adolescent Psychiatry

Prof. Dr. F.C. Verhulst Promotor(s):

Prof. Dr. M.C.H. Donker

1. PhD training

Courses	Year	Workload
		(ECTS)
Classical methods for data-analysis, NIHES, Rotterdam	2009	5.7
Conceptual Foundation of Epidemiologic Study Design, NIHES, Rotterdam	2009	0.7
Introduction to Public Health, Rotterdam, NIHES, Rotterdam	2009	0.7
Biomedical English Reading and Writing, Rotterdam	2010	4.0
Integrity in Medical Research, Rotterdam	2010	2.0
Kwalitatief interviewen, Kwalon, Utrecht	2010	1.0
Inleiding in kwalitatief analyseren, Universiteit voor Humanistiek, Utrecht	2011	1.0
Methodologie van patient gebonden onderzoek en aanvraag subsidieaanvragen, Rotterdam	2011	0.2
Wetenschapsjournalistiek, James Boswell Instituut, Utrecht	2012	3.0

2. Conferences and symposia

Conferences and symposia	Year	Workload (ECTS)
Congres Jeugd in Onderzoek, Utrecht	2009	0.2
Behandeling Centraal, Erasmus MC, Rotterdam	2009	0.2
EuroEpi Congress, Florence Italy (oral presentation)	2010	2.0
WEON congress, IJmuiden (oral + poster presentation)	2011	2.0
Symposium standardized assessment day, Erasmus MC, Rotterdam	2011	0.2
Informatiemarkt Geestkracht, Groningen (poster presentation)	2011	0.5
Werkconferentie academische werkplaats DWARS, Rotterdam (oral presentation)	2011	0.5
Cross-cultural psychology symposium, Tilburg (oral presentation)	2011	0.5

3. Teaching activities

Activity	Year	Workload (ECTS)
Supervising practicals, Erasmus MC Rotterdam	2009-2012	1.5
Supervision bachelor thesis, VU Amsterdam	2010	1.5
Supervision master thesis, Universiteit Leiden	2011	3.0