Children's and adolescents' enrolment in psychosocial care: determinants, expected barriers, and outcomes
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General discussion
The aim of this study was to enhance understanding of children's and adolescents' enrolment in psychosocial care, including the association of enrolment with outcomes of care. We have gained more insight into the process of enrolment by assessing parents' and adolescents' expectations of barriers to care and by looking into determinants of enrolment in and use of care. We obtained insights both from the literature and from data gathered in the context of the Collaborative Centre on Care for Children and Youth (C4Youth). We also obtained knowledge of problems upon entry into care and care types, and on care outcomes after three and twelve months. Figure 1 provides an overview of the research model underlying this thesis, as well as the connections between the various research questions.

In this general discussion we summarize the main findings per research question. We then discuss the findings in a broader perspective. We also discuss some methodological considerations. The chapter ends with implications for practice, policy, education, and further research.

**Figure 1** Conceptual model of this thesis
MAIN RESEARCH FINDINGS

We augmented the understanding of children’s and adolescents’ enrolment in psychosocial care by answering five research questions, as summarized below.

The first research question (Chapter 2) was: How many parents and adolescents in the community sample expect barriers when considering seeking psychosocial care for the child? What types of barriers are most frequently expected? And which child and family characteristics are associated with these expectations regarding barriers to care?

In the community sample we found that 64% of parents of children below age twelve, 59% of parents of adolescents (age 12-18), and 84% of adolescents expected one or more barriers. Parents and adolescents most frequently expected barriers with respect to (potential) ‘irrelevance of treatment’. Mainly parents with low educational level and their adolescents expected barriers regarding treatment: ‘irrelevance of treatment’, ‘problematic relationship with therapists’ and ‘treatment demands and issues’. Various characteristics of parents of adolescents were associated with expecting multiple barriers regarding ‘treatment demands and issues’: being single parents, having a lower educational level, being parents of adolescent boys, and being parents of adolescents with psychosocial problems.

The second research question (Chapter 3) was: What are the psychometric properties of the Barriers to Treatment Participation Scale-Expectancies (BTPS-exp) in terms of internal consistency, scale structure, parent-adolescent agreement and validity?

Using data from the community and care samples we found good internal consistency (reliability) of the total scale and subscales of both the parent and adolescent versions of the BTPS-exp. Moreover, the data had an acceptable fit with the assumed scale structure of the BTPS-exp. Correlation coefficients between parent and adolescent scores were low. Assessment of criterion validity showed that expectation of multiple barriers was significantly more likely in parents of non-Dutch ethnicity, of lower educational levels, in single-parent families, and in cases of child psychosocial problems. Moreover, adolescents with psychosocial problems were more likely to expect barriers. Assessment of criterion validity also showed that expecting multiple barriers did not affect the association between child psychosocial problems and care enrolment. We conclude that the BTPS-exp has good psychometric properties regarding reliability and structure, and is reasonably valid. We found that parents and adolescents have their own separate views on barriers to using and participating in care.

The third research question (Chapter 4) was: What are the determinants of children’s and adolescents’ enrolment in and use of psychosocial care as reported in the literature?
Twenty-two studies met our inclusion criteria and were methodologically strong. Care enrolment and use were determined not only by children's psychosocial problems but also by other child and family characteristics. The main child factors enhancing the likelihood of enrolment in and use of care were having psychosocial problems, urban area residence, life events, past treatment, and academic problems. We found varying effects for age, gender, ethnicity, and place of residence. Main family factors identified contributing to increased enrolment in and use of care were being a single-parent family and socioeconomic status (varying effects).

The fourth research question (Chapter 5) was: Are family social support and parenting skills, two key aspects of the child's social environment, associated with children's and adolescents' enrolment in psychosocial care? And, if so, what role do children's psychosocial problems play in these associations?

We found that enrolment in psychosocial care was more likely in cases of low family social support and poor parenting skills, i.e. poor supervision and inconsistent disciplining. Children's psychosocial problems partially mediated the associations with family social support and completely mediated the associations with parenting skills, but did not moderate the associations. This means, for example, that children of families with low family social support were more likely to have psychosocial problems, and that these problems in turn made enrolment in psychosocial care more likely. Positive parenting was not associated with care enrolment.

The fifth research question (Chapter 6) was: Are the types of problems upon enrolment, i.e. child, parenting and family problems, associated with enrolment in different types of psychosocial care? And do care types differ in outcomes (of care duration and problem solution) after three and twelve months?

We found that the system of psychosocial care functions as intended regarding the distribution of problems across care types. Enroled children had more problems, among which also more often multiple problems, than children not enroled in care. In child and adolescent mental healthcare (CAMH), relatively many children had internalizing problems, and in child and adolescent social care (CASC) relatively many children had externalizing, parenting, family and multiple problems. Regardless of the type of problem, care duration in preventive child healthcare (PCH) was relatively short; in CASC and CAMH it was longer. Reductions in problem rates were substantial but by far not complete: 35 to 62% after twelve months, and relatively higher in PCH. Specifically, for internalizing and parenting problems, the decrease in problem severity was greatest among children in PCH. For externalizing and family problems we found no significant differences on outcomes after twelve months between children in different care types,
and between those in care and not in care. Reductions in problem rates were also substantial among children not in care.

**DISCUSSION OF MAIN FINDINGS**

**Determinants of enrolment in psychosocial care**

A major part of this thesis deals with enrolment of children and adolescents in psychosocial care. First, this regards the existing evidence on determinants, i.e. the main body of research regarding enrolment in and use of care. In our systematic review (Chapter 4) we identified a set of child and family characteristics associated with passing through different stages of the enrolment process and with actual use of care; these stages have been defined by Goldberg and Huxley’s *Pathways to Care* model [1]. The characteristics that we identified were diverse, mainly regarding sociodemographic characteristics, and for some characteristics findings were heterogeneous, i.e. the direction of the associations varied between studies. A large variation in the designs of the included studies, specifically regarding samples, studied determinants and outcomes, limited the potential to draw clear-cut conclusions. Nevertheless, the review revealed that enrolment in psychosocial care involves more factors than just the level and nature of the child’s psychosocial problems. One gap revealed by the review was a scarcity of evidence for factors other than sociodemographic characteristics, such as organizational, profession-related, and client-related psychological and social determinants. Also, most studies focused on use of care, and only few on determinants of the different stages of the enrolment process, i.e. of entering and passing through the care system.

Although we found that having psychosocial problems is a determinant of enrolment in psychosocial care (Chapter 4), our study also showed that some children and adolescents (13%) enrolled in care did not seem to have problems (Chapter 5). We further found that some children and adolescents (35%) not enrolled in care did seem to have problems. These findings confirm previous findings [2-9]. As mentioned in Chapter 5, children enrolled ‘without problems’ might suggest other reasons for enrolment, like the threat of child problems due to unhealthy family situations or a rather quick problem resolution [5, 8, 10, 11]. It could also imply overtreatment [2-9]. The finding of children and adolescents with problems not enrolled in care, may be explained by undertreatment caused by barriers involving problem recognition, help-seeking or referral [12-14]. On the other hand, these children might either be able to cope with their problems, or not really consider their problems as problematic [4, 5, 15, 16].
In Chapter 5 we built upon our review by examining potential determinants other than demographic characteristics. We showed that the child’s social environment, more specifically family social support and parenting, plays a role in its psychosocial care enrolment. Low family social support and poor parenting were associated with psychosocial care enrolment, factors also associated with more frequent occurrence of children’s psychosocial problems. This gives some insight into why the social environment is important for enrolment. Low family social support was associated with psychosocial care enrolment both directly and indirectly via the child’s psychosocial problems. The mechanism may be that social support is a protective factor that buffers the impact of children’s psychosocial problems, or in some cases even prevents problems [17]. This is in line with the ‘Balance model’, showing that child psychosocial problems do not necessarily lead to consequences for the child or the family when other factors function as protective factors [18, 19]. The mechanism behind the direct negative association of family support with enrolment in care might be that a need for professional care originates to a significant extent with problems in the family and is not based only on problems of the child. This is confirmed by our findings in Chapter 6 that children – and families -- with family problems frequently enrol in care [20].

We cannot be conclusive about the direction of the associations between social support and parenting on the one hand and enrolment in care on the other hand, because this part of our study was cross-sectional. It might be that the family is receiving less social support because the child and the family are involved in psychosocial care, for example because of the stigma attached to having psychosocial problems [21, 22]. More specifically, regarding poor parenting we found that poorly supervised children and children exposed to inconsistent discipline were more likely to have psychosocial problems. Good parenting skills might also function as a protective factor to prevent the development of psychosocial problems [23]. This confirms the importance of parenting support in the (early) treatment of child psychosocial problems [15]. These findings on parenting are also in line with those described in Chapter 6, which showed that children from families with parenting problems often enrol in psychosocial care.

We further extended our review by obtaining more insight in the factors and mechanisms that play a role in children’s and adolescents’ enrolment in psychosocial care. In particular, we examined expectations regarding barriers to psychosocial care. To our knowledge, we are the first to assess these expectations in the community. Earlier research on barriers in psychosocial care for children and adolescents was specifically based either on clinical samples [24-30], or on barriers experienced during treatment [12, 31, 32]. We developed the Barriers to Treatment Participation Scale-Expectancies (BTPS-Exp), a prospective questionnaire on potential barriers to children’s
and adolescents’ psychosocial care. Assessment of the questionnaire showed that it had good psychometric properties regarding consistency, structure, and parent-child agreement, as well as reasonable validity (criterion validity). The BTPS-exp enabled us to assess the opinions of parents and adolescents in the community during the various stages of the help-seeking process and the beginning of treatment.

We showed that in the community a majority of parents and adolescents expected barriers to child and adolescent psychosocial care. Both adolescents and parents expected barriers most often regarding treatment (i.e., the expectation that treatment would ultimately be irrelevant) and least often regarding their personal environment (i.e., stressors and obstacles competing with treatment). These findings may explain why not all children with psychosocial problems enrol in psychosocial care, a finding also confirmed in this thesis (Chapter 6) [2-9]. Further, it is questionable whether treatment would be relevant for children and families who expect it not to be effective. On the one hand, these expectations might be caused or fed by negative views on psychosocial care for children and adolescents, as incidents in child psychosocial care gain a lot of media attention [33]. On the other hand, these expectations might be an expression of children’s and parents’ views or experiences that treatments are not attuned to their needs, for example not focused on what they perceive as the most relevant problem [33-36].

Adolescents expected barriers much more frequently than their parents. Previous research mostly shows that parents and children differ in their views; for example, parents usually score higher on the child’s psychosocial problems than the children themselves [37-39]. An explanation for this may be that adolescents are reluctant or afraid to communicate about their problems with care professionals. This reluctance can be understood in the light of their developmental stage, characterized by creating distance from and less dependency on parents and educators [40-43]. These findings stress the importance of making care easily accessible for children and adolescents. They may also imply that, once children and adolescents are in care, it is important to sort out the expectations of the child and the family regarding potential barriers, including the child-therapist relation [40].

What further stands out is that enroled adolescents (i.e., the care sample), systematically expected fewer barriers than their peers in the community sample (Chapter 3). This might simply suggest that adolescents with psychosocial problems enroled in care because they expected fewer barriers. It might also suggest that although adolescents in general have a sceptical view of psychosocial care, this view is adjusted once they are actually in contact with care. The theory of cognitive dissonance might help to explain this difference in the views of the care and community samples. This
theory states that attitudes – in this case prior pessimistic expectations of psychosocial care – might be changed once the experience – in this case the experience with psychosocial care – is different (dissonant) from the expectation [44]. This change of attitudes is called reduction of cognitive dissonance.

Comparing parents from the community and from the care sample regarding their expectations of barriers to care, the pattern is slightly different than comparing adolescents from the community and the care sample. More often than parents in the care sample, parents from the community sample expected that treatment would be irrelevant and that the relationship with the therapist would be problematic. This also seems to reflect a rather pessimistic general parental view of psychosocial care, which could again also stem from negative media portrayal of children’s psychosocial care, or reflect a shaping of care not in line with the family’s situation. However, parents from the care sample expected more practical barriers compared to parents from the community sample, such as practical barriers at home (e.g., problems regarding transport, other children at home, activities, health), and barriers regarding treatment demands and issues (e.g., concerns about treatment cost and duration, having a voice in treatment, and confusing information). These barrier types might become more actual at the beginning of psychosocial care, when its utilisation requires time and finances from the family. This confirms the Pathways to Care model, and shows that specific factors play a role in how children and adolescents pass the various filters of the model [1].

To conclude, various factors play a role in the enrolment of children and adolescents in psychosocial care: psychosocial problems, socio-demographic characteristics, the social environment of the child, and expectations regarding barriers. This adds evidence to the Pathways to care model; it helps to understand why some children and adolescents in the community do pass the first filter to consult a professional for psychosocial problems, and others do not [1].

Once enroled in psychosocial care: care types and outcomes
In the final part of this thesis we examined the process of enrolment, assessing the types and severity of problems upon enrolment, and associations with outcomes of care, i.e. care duration and problem solution after three and twelve months (Chapter 6). In the next paragraphs we will discuss these findings in the light of two assumptions behind the system of psychosocial care for children and adolescents in the Netherlands [45-47]. The first assumption is that PCH treats mild problems, and CASC and CAMH treat more severe problems; this assumption concerns the distribution of problem severity among the care types. The second assumption is that CAMH provides care for children with
more severe psychosocial problems and psychiatric disorders, and CASC focuses on problems in the social context of the child that could impede or threaten the child’s development, and on treatment of children’s psychosocial problems. These problems in the social context include poor parenting and unhealthy family functioning [45, 48]. In short, the second assumption concerns the distribution of problem types among care types.

The first assumption, regarding the distribution of problem severity across the care types, is generally confirmed by our findings. We found that PCH treats mild problems and provides short-term care. In addition, we found that CASC and CAMH treat more severe problems and provide longer treatment [49,50]. Regarding the care outcomes of PCH, CASC and CAMH in relation to this first assumption, we found that in PCH problems are resolved for many children and adolescents. This might simply be because children and families with mild problems – mainly enroled in PCH – have problems that are easier to treat; children with more complex problems mainly enroled in CASC and CAMH. However, these findings may also ‘simply’ reflect a good fit between needs and the care offered. Complex problems are more persistent and, as shown by our data, more often combined with other problems which are being treated mainly in CASC and CAMH [51, 52].

Regarding the second assumption, our findings confirm to some extent the assumption behind the system of distribution of problem types across care types. We found that relatively many children enroled in CASC had problems related to their social environment such as externalizing, parenting, and family problems, whereas relatively many children with internalizing problems enroled in CAMH. However, the differences were small; children and adolescents with externalizing, parenting and family problems were also enroled and treated in CAMH and children with internalizing problems were also enroled in CASC. It might be that over time, the various care types of CASC and CAMH have gradually come to overlap and include parts of each other’s approach. On the other hand, the strong mutual impact, i.e. adverse social and economic circumstances lead to psychosocial problems and vice versa, might impede differentiation of the problems of a majority of the clients [45,48].

Our findings on outcomes also showed rather similar degrees of problem solution and decreases in problem severity between CASC and CAMH, especially for internalizing and parenting problems. It seems that both care types aim at problem solution for every type of psychosocial problem of children, adolescents and their families.

We further found that the percentage of resolved problems varied between 35% (for internalizing problems and CAMH after twelve months) and 62% (for parenting problems in PCH after twelve months). Also, decreases in severity of problems after
twelve months varied from 10% (parenting problems enrolled in CAMH) to 34% (internalizing problems enrolled in PCH). This confirms previous findings [9, 53-55]. A substantial percentage of the children and adolescents and their families may thus benefit from psychosocial care, their problems being either resolved or relieved.

These positive findings on outcomes of care, i.e. a substantial reduction in problem solution and problem severity, somewhat counterbalance the general community’s expectations barriers to psychosocial care. These expected barriers mainly concerned the irrelevance of treatment, the expectation that treatment would not work (Chapter 2 and 3). However, our results in Chapter 6 demonstrate that many children and adolescents enrolled in psychosocial care experience at least partial problem solution.

Finally, we found substantial reduction of problems among children, adolescents and families enrolled in care. At the same time we found substantial reduction of problems among children and their families – with problems – who were not enrolled in care. This is in line with earlier evidence on the need for care that indicates that some adolescents with psychosocial problems do need care (according to their parents) whereas others apparently do not [3, 4].

**METHODOLOGICAL CONSIDERATIONS**

For this thesis we used data from the TakeCare study, which is part of C4Youth [45]. The TakeCare study demonstrates that it is possible to set-up a longitudinal prospective cohort study of children and adolescents enrolled in psychosocial care in order to generate valuable insights for research, policy and practice [45]. For this thesis we examined enrolment in the system of psychosocial care from the perspective of children, adolescents and their parents. Below, we will describe the main strengths and limitations of our study regarding the quality of the sample, the quality of the information obtained, and causality and confounding.

**Quality of the sample**

An evident strength of our cohort study is the inclusion of children and adolescents enrolled in psychosocial care as well as children and adolescents from the community. We were able to include children and adolescents in a well-defined catchment area and provide an overview of the main types of psychosocial care. Another strength is our large sample size (N=1,382 care sample, N=666 community sample), the extensive recruitment procedure, the successful actions to reduce missing data, and the relatively good response rate (56.6% response care sample, and 70.3% response community sample) [45]. Compared to the community sample, the response in the care sample was lower.
This shows that children and adolescents with psychosocial problems and their families are a more hard-to-reach target group, potentially causing selection bias due to systematic non-response [45]. However, when comparing the respondents and non-respondents only small differences were found in age, gender, rural/urban area and psychosocial difficulties; this decreases the likelihood of selection bias. Finally, the TakeCare study enabled us to longitudinally compare children and adolescents enroled in care, and those not enroled, with high retention (i.e. loss to follow-up at the second and third waves was 6.9% and 8.8%, respectively, for the care sample, and 2.0% and 2.2%, respectively, for the community sample).

**Quality of the information obtained**
This thesis focused on the client perspective, relying on self-report information from parents and adolescents. In this way we obtained a broad range of information, mainly using standardized measurement instruments regarding both determinants and outcomes. Inclusion of other perspectives, like those of care professionals or teachers, might have yielded additional insights, since perspectives on psychosocial problems differ [56, 57]. This evidently deserves further study.

**Causality and confounding**
Our study on outcomes, Chapter 6, was set up longitudinally, enabling us to assess time sequences in care. Our study aimed to assess the associations between characteristics of children, adolescents and their families on the one hand and outcomes regarding enrolment on the other hand (Chapters 2-5); many factors may confound these associations. We therefore took into account potentially confounding variables such as socio-demographic characteristics and past use of psychosocial care. It should be noted that we assessed outcomes, and not effects, of care.

**IMPLICATIONS**

**Implications for practice and policy**
Our findings have several implications for practice and policies on psychosocial care for children and adolescents. First, we found that the social environment plays an important role in enrolment in care: little family social support and poor parenting, i.e. poor supervision and inconsistent parenting, increased the likelihood of enrolment of children and adolescents in psychosocial care. This suggests that better parenting skills and stronger support from the family's social network may to some extent prevent children's psychosocial problems, or help them to cope with or solve problems, either
within the family itself or with the help of the social network. This relates to the aims of the current transition and transformation of the system: (1) to prevent psychosocial problems and to rely on the responsibility and opportunities of children and their families themselves, with help of their social network, and (2) to de-medicalize and normalize the upbringing of children by strengthening the pedagogic climate in families, neighbourhoods, and schools [58]. Our findings imply the value of efforts to strengthen parenting skills and activate the social network of children and families.

Second, our finding that a majority of the community sample expects barriers to psychosocial care implies that a negative perception may prevent them from obtaining appropriate care. The most prevalent barriers are the expectation that treatment is irrelevant and the fear that the relationship with the professional will be problematic. Professionals and policy makers should be aware of this in order to develop strategies to lower barriers for these specific groups. The BTPS-exp, or its themes, can be used to address these barriers. This could be a starting point to reach another aim of the transition of the system, i.e. to provide effective, timely and tailored care to children and families, preferably in their own environment.

Third, we found that at the very moment of enrolment, children, adolescents and parents continue to expect substantial barriers to care. This expectation could keep children and families from actually starting psychosocial care, adhering to treatment or taking advice [26, 31, 32]. For practice, this implies that professionals and policy makers should be aware of these expectations, and that adolescents and parents differ to some extent in their views on barriers. Explicit discussion of barriers between the family and the professional is needed in order to actively search for solutions and better attune treatment to the situation of the child. Again, the themes of the BTPS-exp might be helpful in this.

Fourth, our finding that children and adolescents enroled in PCH are treated relatively briefly and with positive care outcomes in terms of problem solution, is promising. This relates to the aim of the transformation of the system of psychosocial care to putting more effort into the prevention of psychosocial problems, and may imply that PCH can have a central role in reaching this aim.

Finally, we found that a substantial number of the children and adolescents and their families benefit from or at least during psychosocial care in terms of resolution and relief of problems; this supports professionals working in the field. Although we cannot establish whether this is an effect purely of the psychosocial care itself, it might be worthwhile to bring about positive stories of children and families that benefited from psychosocial care with the help of the professionals involved. This could somewhat counterbalance the negative imaging of psychosocial care in the media [59].
Implications for research

Our findings that some children and adolescents enroled in care did not seem to have problems (13%), and children and adolescents not enroled in care did have problems (35%) raise issues for further investigation. In Chapter 6 we suggest several reasons for these findings. For example, future research using qualitative methods could give more in-depth insights on these findings, including how to value them. Regarding potential over- and underdiagnoses it is worthwhile to explore other parts of the process of enrolment (like problem recognition, help-seeking, decision-making) with professionals able to detect psychosocial problems: teachers, ‘local area teams’, preventive child healthcare and general practitioners. Children with problems not receiving care may have other supportive elements in their environment that enable them to cope with their problems, and that deserve further study.

Our findings on enrolment in association with outcomes of care call for further research to better understand psychosocial care. Rates of problem resolution between 35% and 62% after twelve months are substantial, and even more notable given the relatively short follow-up period. Moreover, in some cases care was probably aimed not at solving problems but at making problems more manageable, reducing the burden for the child, its family and the social environment [18, 60, 61]. Our findings invite examination of which factors – client, care or profession-related factors – are associated with resolution and/or decrease of psychosocial problems [62]. Also whether care affects outcomes such as the burden to the family or the child's participation in school and society [45].

Regarding care outcomes, we found the level of problem solution between the care types CASC and CAMH to be rather similar across the different care types. This raises further questions: Among which children and families are outcomes less successful, and how can this be explained? Which specific characteristics of treatment make the difference and should be further examined? Continued research could shed light on those specific elements in treatment by each care type that are most strongly associated with better outcomes [46, 47].

Finally, we examined enrolment in care from the perspective of children, adolescents and their families. This is but one side of the coin; it would be interesting to examine barriers and facilitators of enrolment also from the perspective of professionals working in psychosocial care [62, 63].
CONCLUSION

In conclusion, our findings add to the understanding of children’s and adolescents’ enrolment in psychosocial care by shedding more light on factors associated with enrolment and the association of enrolment with several outcomes of care. Our findings show that the (previous) system of psychosocial care for children and adolescents performed in accordance with the Pathways to Care model [1], referring children with mild problems for treatment within light psychosocial care and children with more severe and complex problems to more specialized care. Our findings also showed that enrolment is affected by various factors, i.e. views regarding barriers to care, factors in the social environment of the child, parenting, social support, and family problems. Findings on outcomes of care showed that care duration in PCH was relatively short, in CASC and CAMH longer, and that CASC and CAMH have an overlap in the types of problems enroled. Finally, psychosocial care as provided led to substantial reductions in the problems of children and adolescents.
REFERENCES


