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**Children with emotional and behavioral disorders in special education:
Placement, progress, and family functioning**
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Citation

Stoutjesdijk, R. (2014, January 16). *Children with emotional and behavioral disorders in special education: Placement, progress, and family functioning*. Ridderprint B.V., Ridderkerk. Retrieved from <https://hdl.handle.net/1887/23005>

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Note: To cite this publication please use the final published version (if applicable).

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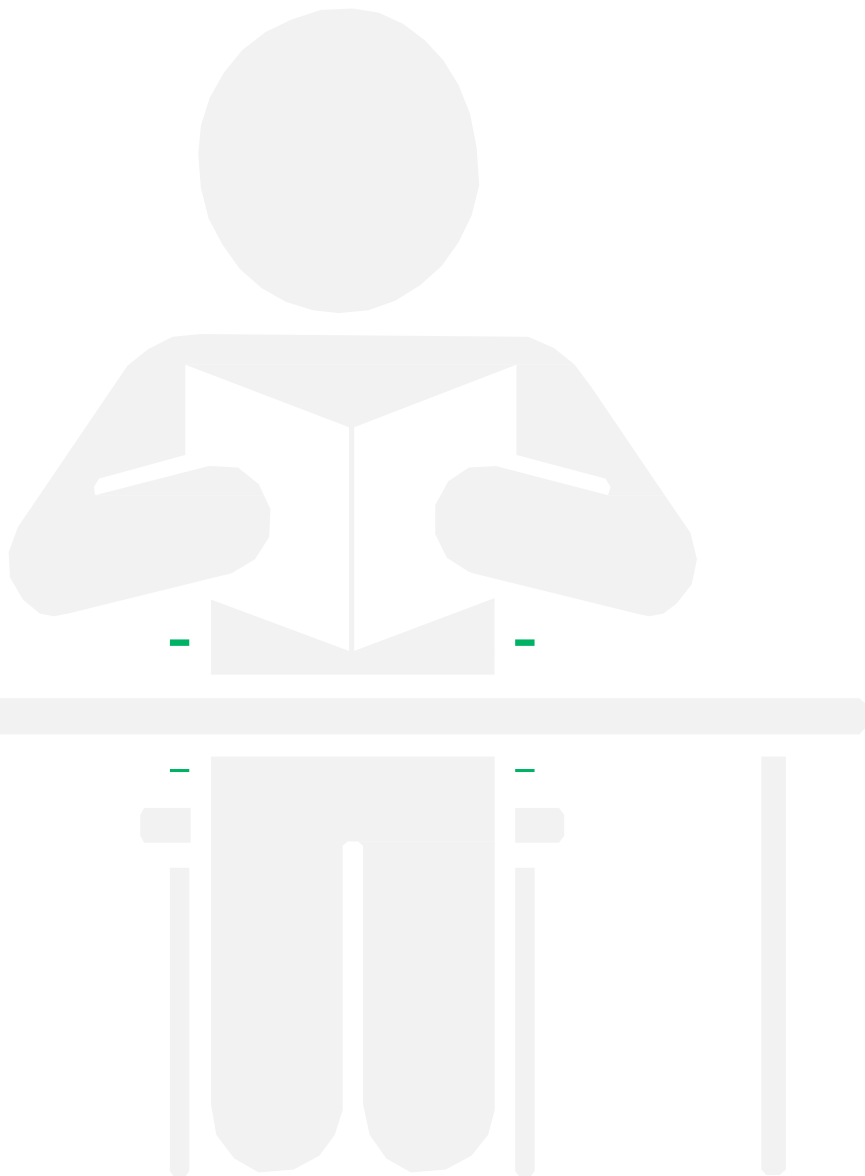
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Title: Children with emotional and behavioral disorders in special education : placement, progress, and family functioning

Issue Date: 2014-01-16

General Conclusions and Discussion

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Children with special educational needs require additional support in order to profit optimally from their education. This special educational support can be offered in regular schools or in more restrictive settings such as a special school. Children with emotional and behavioral disorders (EBD) as their primary disability are a substantial part of the population receiving special education. However, several important topics for this group remain underexplored. First, there is a need for a better understanding what characterizes the special educational needs of children with EBD who visit special schools or receive inclusive education at regular schools, and to learn which of these characteristics affect inclusion of these children in regular education. Second, there is little knowledge about behavioral and academic progress of children with EBD in various special educational settings, and of a possible differential influence of setting on progress outcomes. Also, more clarity is needed regarding the extent to which common pedagogical strategies are used in the classroom to ameliorate problem behavior and the relation with progress. Third, research has documented that the family context plays an important role in the development of problem behavior and the extent to which this behavior is displayed in other contexts than the home environment such as the school. However, the relation between family factors and classroom problem behavior of children with EBD in special education has never been examined so far. Therefore, the main objective of this dissertation was to gain more insight into the before mentioned topics. Extension of our knowledge is necessary for a better understanding of learning environments that best fit the educational needs of these children, and can serve as important input for the improvement of intervention strategies and special educational services provided by teachers and other professionals to children with EBD in special education. In this chapter, the general conclusions will be presented and discussed in relation to limitations and implications for future research and practice.

Characteristics that Predict Restrictiveness of Special Educational Setting

Previous research into special educational placement of children with disabilities shows that children with EBD are placed more often in settings of a more restrictive type, such as segregated classrooms or separate schools and facilities, than children with other disabilities like physical handicaps or learning disabilities (LD) (De Greef & Van Rijswijk, 2006; Epstein, Nelson, Polsgrove, Coutinho, & Quinn, 1993; Stephens & Lakin, 1995). Considering the international opinion to move towards inclusive education for children with disabilities and the considerable efforts governments make to offer these children a place in a regular school environment, the question arises why the inclusion of children with EBD is relatively limited.

In order to provide more insight into this matter, we first examined differences in characteristics of children with EBD who are educated in settings varying in restrictiveness, i.e. schools for special education and regular schools with special educational support

(inclusive education). Overall the findings indicate that children with EBD in special schools are more severely disabled, function on a lower cognitive level, experience more risk factors, and come from more poorly functioning families than children with EBD in regular schools. *The presence of relational problems between child and caregiver, poor academic performance, and a young age when youth care was called in for the first time* were found to be the strongest discriminating factors of placement in a special school or a regular school. The relevance of these three factors in the prediction of the level of restrictiveness of special educational placement was also stressed by Hosp and Reschly (2002), who found a similar set of discriminating factors for children with learning disabilities (LD). The findings of this previous study and our study suggest that placement in a restrictive setting is determined to a greater extent by factors other than those arising directly from the impact of the developmental disorders, such as the severity of internalizing and/or externalizing behavior.

Differential Influence of Special Educational Setting on Progress

As mentioned previously, under the influence of the movement towards inclusive education for children with disabilities, these children can receive special education in settings varying in restrictiveness. As a consequence, the number of children with disabilities in regular schools is increasing (Chakrabarti & Fombonne, 2001; Inspectie van het Onderwijs, 2013). It has therefore become increasingly important to evaluate developmental progress of children with disabilities who receive special support and the extent to which progress might be differentially influenced by educational setting. However, regarding children with EBD, studies examining developmental progress in special education are rare, in particular across settings. To extend our knowledge about this topic, we explored and documented differences in progress between children with EBD in special schools and in inclusive education. We focused on children with ADHD and children with high-functioning ASD (HFASD) specifically, because they make up a substantial part of the population with EBD who receive special educational support, and because they generally can be considered for placement in restrictive environments as well as for inclusive education. We examined progress in children's functioning by including measures of disorder-specific symptoms and non-disorder-specific problem behavior, and by assessment of performance in reading, spelling, and mathematics. At the time of pre-assessment, children in both settings were comparable on these measures and on relevant background characteristics.

Progress in behavioral functioning

Our findings indicated that children with ADHD in both educational settings made progress in behavioral functioning showing a decrease of impact of ADHD-disorder specific symptoms. Regarding non-disorder-specific problem behavior, we found a trend towards a

decrease of physical complaints, thought problems, and social problems. Comparable results were found for children with HFASD: in both settings improvements were made within one year, showing a decrease in severity of autistic behavior, social problems, and attention problems. The results are partly comparable to those found in previous studies. For example, Arick et al. (2003) and Osborne and Reed (2011) also found progress regarding emotional and behavioral difficulties, and behaviors associated with ASD. On the other hand, Charman et al. (2004) reported no decreases in symptom severity, communication, and socialization for children with ASD.

Progress in academic achievement

Regarding academic achievement progress was found for children with ADHD and children with HFASD on mathematics, reading, and spelling. However, the growth rate did not respond to the academic achievement standards typically set for children with an IQ in the normal range. This implies that although the children with ADHD and the children with HFASD made progress in all measured core curricular areas, they underachieved in relation to their cognitive abilities. These results correspond to previous research on academic outcomes of children with ADHD showing that underachievement is common in this population when IQ is controlled for (Diamantopoulou, Rydell, Thorell, & Bohlin, 2007), or when children with ADHD are compared with typically developing peers matched by intelligence (Barry et al., 2002). Similar findings are also reported for children with HFASD by Ashburner et al. (2010), who compared children with this disorder in regular classrooms with typically developing peers on several developmental aspects, including academic achievement.

Differential influence of educational setting

Contrarily to what we expected for both children with ADHD and children with HFASD no significant differences were found in the degree of progress made between children in special schools and in inclusive education regarding behavioral and academic functioning. These findings suggest that, with background variables and studied variables initially similar, school environment does not account for differences in progress between settings regarding improvement in the before mentioned areas for these particular groups of children.

We found no studies focusing on progress in behavioral functioning of children with ASD across educational settings, but similar outcomes were found in previous studies comparing progress in the acquisition of language skills (Harris et al., 1990) and academic performance (Waddington & Reed, in press) of children with ASD in inclusive education and special schools. Regarding children with ADHD, no studies comparing behavioral and academic progress in different special educational settings are available as yet. However, some studies on this specific topic have been conducted with children with learning

disabilities and behavioral disorders in general and did report differences in developmental progress between children across settings, although the results were not conclusive. For instance, Peetsma, Vergeer, Roeleveld, and Karstens (2001) revealed no differences in psychosocial development between children with mild learning and behavioral disorders (LBD) in inclusive education and in special schools, but stronger cognitive gains were found for children with LBD in inclusive education. On the other hand, Schneider and Leroux (1994) found that children with behavioral disorders in special classes showed higher academic achievement, but less improvement in self-concept than children with behavioral disorders in inclusive classrooms.

Pedagogical Strategies Related to Progress in Behavioral Functioning

Apart from behavioral and academic functioning, we examined the influence of common pedagogical strategies used for children with ADHD and children with HFASD in the daily classroom practice by studying relations between progress and the extent to which these strategies were emphasized. The selection of included strategies was based on literature about intervention and treatment of children with these disorders. For children with ADHD the results showed that positive behavior reinforcement was most strongly related to a decrease of ADHD-associated problem behavior. This outcome was expected and in line with extensive previous research into the effectiveness of interventions based on this strategy that aim at reducing problem behavior in children with ADHD (e.g., Fabiano et al., 2010; Owens et al., 2005). For children with HFASD structuring of the learning environment and reinforcement of social and communicate behavior were related to a decrease in social problems and autistic behavior, respectively. These relations were also hypothesized, because these strategies are widely used to ameliorate the attentive, social, and communicative problems of children with ASD.

A finding that was not expected was the relative importance of offering emotional support in decreasing problem behavior of both children with ADHD and children with HFASD, because initial analyses showed that this strategy was the least emphasized in the daily classroom practice, and because the use of this strategy appears somewhat less obvious in the treatment of children with primarily externalizing behavior or children who experience difficulties in the areas of social interaction and communication. However, similar findings were also reported in other studies. Hamre and Pianta (2005), for example, found that emotional support offered by teachers played a particularly important role in the positive development of children with a combination of classroom problems such as academic, social, and behavioral problems. Scholte, Van Berckelaer-Onnes, and Van der Ploeg (2007) examined emotional and behavioral development of children with ADHD in after-school day treatment centers, and reported a reduction of ADHD symptoms at follow-up only when the emphasis on behavioral control was combined with expressing emotional support. The findings of our study and the previous studies suggest that

emotional support should be an important element in the treatment of children with ADHD and HFASD in special education.

Relations between Family Functioning and Classroom Problem Behavior

Study findings show that children with EBD who receive special educational support are more likely to live in poorer functioning families than children with other disabilities receiving special educational support or typically developing children (Wagner et al., 2005). Reasoning from the ecological model of Bronfenbrenner and the coercive interaction theory we may hypothesize that poor family functioning is related to the severity of problem behavior displayed by children with EBD in the classroom. When such a relation indeed is present, it could counteract the support provided to these children and diminish the effectiveness of special educational interventions. However, as far as we know, studies examining this relation for children with EBD in special education are virtually unavailable. Therefore, the impact of family functioning on classroom problem behavior could not be determined for this specific population so far.

We examined this relation for internalizing, externalizing, and total problem behavior at school over two points in time. First, our results indicated that problem behaviors, in particular externalizing behavior, are stable over time, even in a context aimed at improvement of such behaviors. Support for our findings can be found in earlier longitudinal studies examining developmental courses of psychopathology, including externalizing and internalizing behavior (Englund & Siebenbruner, 2012; Hofstra, Van der Ende, & Verhulst, 2000; Mäntymaa et al., 2011). Family functioning was also found to be stable over time, which is consistent with findings reported in a follow-up study by Huh et al. (2006). Second, of the five domains of family functioning, (1) poor communication, (2) a discordant partner relationship, and (3) lack of social support were most strongly associated with future total problem behavior displayed in the classroom. Also, parental responsiveness to a child's needs appeared to reduce future total problem behavior. These findings are consistent with earlier studies examining the relation between family functioning and the development of problem behavior in community settings (e.g. Burke, Loeber, Lahey, & Rathouz, 2005; Gilman, Buka, Kawachi, & Fitzmaurice, 2003; Stormshak, Bierman, McMahon, & Lengua, 2000; Vance, Bowen, Fernandez, & Thompson, 2002).

The results for externalizing problem behavior were different than those for total problem behavior and internalizing problem behavior in the sense that we found a direct association between externalizing behavior and future poor family functioning instead of vice versa. A possible reason for this contrasting result could be the pervasive nature of externalizing behavior. Compared to internalizing problem behavior it is more stable over time – as was found in our study – , which indicates that it is more difficult to influence this type of problem behavior through environmental factors or interference. Support for our results can be found in earlier research where findings show that changes in externalizing

problem behavior have a greater influence on parenting behaviors than changes in parenting behaviors have on externalizing behavior (Burke, Pardini, & Loeber, 2008; Huh et al., 2006; Stice & Barrera, 1995).

Our findings confirm the notion of mutually dependent environments as described in Bronfenbrenner's ecological model (1986; 2005) for this specific population. Together with the results described in Chapter 2, i.e. relational problems between children with EBD and their caregivers is the strongest predictor for placement in a more restrictive educational setting – a setting where generally children with more severe behavioral problems are enrolled – , these findings underline the importance of an integral approach towards amelioration of emotional and behavioral problems in children. Within such an approach, support must be provided to children and their families simultaneously and coherently.

Limitations and Future Directions

Given the quasi-experimental design of our study and the limited available data regarding our research topics, the results of this study must be considered exploratory in nature. This has implications for the interpretation of our study findings. For instance, in Chapters 2 and 3 we have tried to document progress outcomes of children in two special educational settings and described differences in progress between these settings. Based on the current data, it is not possible to draw conclusions about the effectiveness of the settings or (the absence of) differences in progress outcomes. Studies in which other variables are controlled for, for instance teacher experience, parental involvement, and classroom climate, are needed to confirm our findings and shed more light on them. Therefore, our results should be considered as providing leads for further research into the studied topics, and to give suggestions for practice and policy making.

Some limitations concerning generalizability should be bared in mind as well when interpreting the results. International educational systems often consist of a continuum of special educational services and settings, resulting in a larger variety of learning environments. However, due to the Dutch educational system we were able to compare children in only two special educational settings, i.e. special schools and regular schools with special educational support (full inclusive education). This restriction might make the results of our study less applicable to international educational systems. Also, a consequence of a larger variation in learning environments might be that there is a wider spread of population characteristics, such as problem severity, between special educational settings. This may result in a different composition of characteristics of Dutch children in special schools and in inclusive education compared to the characteristic of children in similar settings in other countries. Therefore, we recommend future studies to include samples of children with EBD enrolled in a larger variety of settings within a special educational continuum. With the prospect of a changing Dutch educational system as a

result of the Passend Onderwijs policy – which leaves room for other special educational practices – this might also become feasible for research conducted in the Netherlands.

Another concern with respect to generalizability of the findings is the specificity of characteristics of the studied children with ADHD or HFASD (Chapters 2 and 3). In order to make a reliable comparison, the children in special schools and in inclusive education had similar learning/behavioral profiles with problem severity and cognitive functioning on a certain level. This limits the generalizability of the findings to children diagnosed with ADHD or HFASD who have different learning needs and abilities than the children in our study. To further broaden our understanding of progress of children with ADHD or HFASD in special education, samples with other learning/behavioral profiles should be studied.

Considering the exploratory nature of our study, we have chosen to focus initially on general problem behavior, disorder-specific behavior, and academic achievement. However, to obtain a more comprehensive picture of children's functioning in a special educational setting, future research should also include instruments that measure a larger variety of behaviors and skills relevant for functioning in a school environment, such as adaptive behavior, social skills, on-task behavior, and motivation. Also, when focusing on children with specific developmental disorders, it would be informative to include additional instruments that measure symptom-specific aspects in greater detail.

Practical Implications

One of the main findings of our study is that no differences were found in progress outcomes between children in special schools and in inclusive education. This might indicate that equal progress in the investigated areas can be expected in either setting for the specific groups of children included in our study. Based on this finding, a cautious recommendation that can be made is that, in terms of progress outcomes, the option of a regular classroom as a suitable learning environment for children with EBD should be considered more often when decisions about special educational placement in the least restrictive environment are to be made. However, to enhance their chances of being included in regular education and to stimulate positive development, certain aspects that arise from our study findings should receive attention.

One important aspect concerns family functioning, in particular the communication between children and caregivers, the relationship between caregivers, and responsive parenting. Difficulties in these areas were associated with classroom problem behavior and a diminished likelihood of being placed in an inclusive setting. It is therefore of vital importance that support is also provided to the families of children with EBD if problems in the before mentioned areas exist. Within such an integral approach, support must be provided coherently. It is therefore essential that a closer and more fruitful collaboration between schools and family care services, and teachers and parents, will be established,

which can also increase the efficacy of interventions and support provided to children with EBD in the classroom.

A second aspect is the relative importance of emotional support in the reduction of maladaptive classroom behavior of children with EBD. Because of the predominantly externalizing problem behaviors and/or difficulties with communication and social interaction of this population, educators and program makers are possibly less inclined to emphasize this strategy in the daily classroom support of children with EBD. However, according to our research findings, emotionally supportive interactions between children and educators deserve a more prominent place in the treatment of children with EBD, all the more because the quality of the teacher-child relationship was found to be an important predictor of successful school adjustment for children at risk (e.g. Baker, Grant, & Morlock, 2008; Hamre & Pianta, 2005).

The relation between specific (classroom) interventions and academic performance is a third aspect that should receive particular attention. Not only because poor academic performance was found to be an important indicator of placement in a restrictive setting, but also because our studies have shown that children with EBD in both educational settings underachieve in relation to their cognitive abilities and compared to typically developing peers. The interfering nature of problem behavior and its negative effect on task orientation might direct special educational support for a substantial part towards behavior amelioration – in the assumption that learning will improve as an indirect consequence of behavior support. Our findings indicate that learning and academic achievement and its supporting mechanisms should receive heightened emphasis within educational intervention programs. This issue has also been put forward by the Dutch Inspectorate of Education (Inspectie van het Onderwijs), who stated that an increased focus on study results, and a better fit between educational curriculum, methods, and individual learning needs of children in special education is required in order to increase their performance. In this context, monitoring and evaluating academic achievement, individual needs and progress outcomes is of vital importance. However, these methods are not often practiced in special education (Inspectie van het Onderwijs, 2013).

Last, successful inclusion of children with EBD in regular education largely depends on the degree to which teachers are capable of educating and supporting children with such difficulties in their classrooms. Professionalization of teachers by expanding their knowledge of and experience with the support of children with EBD is therefore important. This can be realized for example by teacher training or by letting teachers engage more often in multi-disciplinary consultations with school psychologists and other professionals. Also, handling and supporting children with EBD and their specific individual needs should receive more attention in the curriculum of teacher training so that teachers-to-be learn to be effective and experience more confidence when educating these children.

Final Remark

Our study findings suggest that children with EBD can make similar progress in a regular classroom compared to a special school. This is important knowledge to consider when decisions about special educational services and placement in the least restrictive environment have to be made. However, these findings do not imply that inclusive education is a feasible option for all children with EBD. Taking into account the complexity and severity of the problems of some children with EBD, it is questionable whether regular schools will ever be able to provide suitable education for children who have to cope with the most severe emotional and behavioral disorders. For these children special schools, or wholly or partly separated facilities with more knowledge, time, and means to handle children with these types of behavioral problems will probably always be needed.

