Chapter 7

GENERAL CONCLUSIONS AND DISCUSSION
In this chapter, we draw overarching conclusions based on the studies carried out in this research, followed by a number of implications for practice, policy and further research. In this thesis, we emphasize the role of the teacher’s perception in relation to pupil behavior, the context and interaction within which this perception is established and the degree of adaptability of this perception. In the introduction we described the developments around inclusive education. We have elaborated on the differences between the individual approach versus the community approach on the one hand, and the (bio)medical model versus the social model of differences in special needs on the other. Miles (2000) elaborates on the social model of differences in special needs for the educational context, and mentions a number of contextual factors within education (see also Figure 2 in the introduction). For example, the extent to which the teacher feels sufficiently trained to be able to teach optimally, methods used by teachers, the extent to which the teacher feels supported, but also the teacher’s attitude towards inclusive education and children with special needs. In this thesis, the context is understood in a broad sense, referring to everything that lies outside the individual child, such as teachers’ perception of child behavior in relation to the child’s relative age (Chapter 2), the impact of the number of unruly children in class on teacher perception of the behavior of other pupils (Chapter 3), teacher perception after implementation of a support approach (Chapter 4), and teachers’ vision on ADHD classification (Chapter 5) and medication (Chapter 6).

Three quantitative and two qualitative studies were carried out. The following main conclusions emerge from the various sub-studies:

1. The group of teachers is characterized by a high level of heterogeneity with regard to the perception of children’s behavior (section 7.1);
2. The context within which teachers work influences their perception of pupil behavior (section 7.2);
3. Many teachers are ambivalent towards the usefulness of an ADHD-classification in general, but experience the advantages of a classification in the educational context (section 7.3).
7.1 Differences between teachers

The various studies in this thesis show that the group of teachers is characterized by a high level of heterogeneity with regard to the perception of children’s behavior. This is shown for example in Chapter 2 where we investigated the extent to which the relative age of children in the classroom influences the teacher’s perception of their behavior. Much international literature (Chen, Lan, Bai, Huang, Su, Tsai et al., 2017; Dalsgaard, Humlum, Nielsen & Simonsen, 2014; Elder, 2010; Evans, Morrill & Parente, 2010; Halldner, Tillander, Lundholm, Boman, Langstrom, Larsson et al., 2014; Karlstad, Furu, Stoltenberg, Häberg & Bakken, 2017; Krabbe, Thoutenhoofd, Conradi, Pijl & Batstra, 2014; Morrow, Garland, Wright, Maclure, Taylor & Dormuth, 2012; Sayal, Chudal, Hinkka-Yli-Salomäki, Joelsson & Sourander, 2017; Whitely, Raven, Timimi, Jureidini, Phillimore, Leo, Moncrieff & Landman, 2018) shows that young children in the classroom are more likely to be diagnosed with ADHD and be given medication than their older classmates. In our research among teachers, we did not find this link (Chapter 2), possibly because in other studies the diagnosis was used as a point of departure whereas in our research behavioral questionnaires completed for all pupils in the classroom were used. Another possible explanation is that, just as a small minority of medication prescribers are responsible for the majority of ADHD prescriptions (Department of Health of Australia, 2015), a small minority of teachers may perceive normal but relatively young behavior as deviant behavior. This may, however, not be the case for the majority of teachers. Hence, the extent to which the relative age effect plays a role in the perception of a pupil’s behavior may differ from teacher to teacher.

The extent to which teachers perceive pupils’ behavior as remarkable or problematic can be influenced, although the degree to which also varies from teacher to teacher. This is evident from the research in Chapter 4. Implementation of an approach in which all teachers in a school received the same coaching and training had a different effect from teacher to teacher. On average, teachers perceived the behavior of children slightly less negatively after implementation of the approach, but the differences between teachers in the size of the effect were substantial.

Differences between teachers were also evident in Chapter 5, in which we investigated the attitude of teachers with regard to ADHD classification. The smallest group of interviewed teachers rejects classification, because of disadvantages like that an ADHD classification bears down on a child for many years. Another small group sees no added value in classification in educatio-
nal practice. The largest group is ambivalent towards an ADHD classification but indicates that it has advantages in educational practice. If a teacher sees significant added value in a psychiatric classification and medication in daily teaching practice, it is possible that, in the case of deviant behavior, a suggestion to parents to take steps towards a diagnosis will be made earlier. Chapter 6 also shows differences between teachers, in this case in their attitude towards the use of ADHD medication. The largest group sees the benefits of the use of medication in daily educational practice, but feels ambivalent because of for example safety issues. A small group reports having reservations about the use of medication.

7.2 The teacher’s perception is established in interaction with the context in which the teacher works and can be influenced

The context in which the teacher works seems to influence the perception of pupils’ behavior in the classroom. In this thesis, a number of interactions with this context have been found. For example, in Chapter 3, the number of boys and unruly children turned out to be related to teacher’s perception of the behavior of all pupils in class. Chapter 4 showed that it is possible to change teachers’ perceptions of children’s behavior. We investigated the influence of the School-Wide Positive Behavior Support (SWPBS) approach on the perception of children’s behavior. Within this approach, clear behavioral expectations and learning good behavior play an important role.

Contextual factors are also visible in Chapter 5. This research shows that a group of teachers sees the ADHD diagnosis as an explanation for the perception that the child differs from its classmates. The research shows that ADHD classification in pupils benefits contact and cooperation with the parents, according to the largest group of teachers. It also reduces the teacher’s sense of guilt that their approach does not work well. Teachers indicate that they feel guilt towards parents if the child is not performing well. This suggests that parents (a contextual factor) also play an important role in the development of teachers’ perceptions.

In short, we addressed a number of factors in the context of the pupil that influence the perception of teachers with regard to children’s behavior. A one-sided focus on children’s behavior and searching for the cause of this behavior in the child does not do enough justice to the role that variables in the
child’s context play in forming the perception of this behavior and also in finding possible solutions.

7.3 **Ambivalence towards ADHD classification**

The number of children with a classification/diagnosis of ADHD has risen sharply worldwide (see Chapter 6 in this thesis). As described in Chapter 6, schools are often the first referrers for classification or diagnosis, which makes it important to know why teachers choose this direction. What added value does this provide for them? The studies in Chapters 5 and 6 of this thesis show that three groups of teachers can be distinguished when it comes to ADHD. There is a group of teachers who take a negative view of the classification and point out its negative consequences. Another group rejects classification because it has no added value in the educational context. The largest group of teachers, however, is ambivalent. On the one hand, they see the advantages of a classification for the educational context, on the other hand they see disadvantages or no added value for the educational context. Advantages mentioned are that a classification removes guilt from teachers, parents and pupils: the notable behavior is entirely attributed to ‘the disorder’. The classification brings that ‘new life into’ the collaboration between parents and teachers on new shared terms, after experiencing problems with the behavior of a child. Last but not least, an ADHD diagnosis may be viewed as an advantage by teachers because it provides the option to medicate an inattentive and/or hyperactive child (see Chapter 6).

7.4 **Overall image**

The three general conclusions based on the different studies in this thesis all point to the importance of the teachers and their perception vis-à-vis child behavior and their attitude towards classification. These context variables play a role when remarkable behavior is observed in a child. Research in this thesis shows that teachers’ perceptions cannot be understood through the behavior of one child only. The other children in the classroom, the number of boys in the classroom (Chapter 3), School-Wide Positive Behavior Support approach (Chapter 4) and teacher’s attitude towards classification and their relation with parents (Chapter 5) also influence this. In short, perceptions and attitudes of te-
achers about the behavior of children are dependent upon the context in which child behaviors are perceived, not only upon the behavior of the individual child.

### 7.5 Discussion

The Netherlands is aiming for more inclusive education and is working on education tailored to every child to this end. In the introduction, we argued that the focus on the individual and the medical model play an important role in current developments in the Netherlands. The medical model of differences in educational needs mainly searches for a possible cause and solution in the individual (Burchardt, 2004; Mitra, 2006) and is still one of the most dominant disorder models used worldwide (Porter, 1997; Wade & Halligan, 2004), also in educational settings (Haegel & Hodge, 2016). Professionals working with the social model as explanatory framework (Figure 2 in Chapter 1), do not (or to a lesser extent) attribute the problems to the individual, but to the non-optimal context and the way in which society is organized (Parker, 1997; Peters, 2007; Slee, 2001). The two models should be understood not so much as each other’s ‘counterparts’ that mutually exclude each other, but rather as gradual models that are complementary to each other (Mitra, 2006). The studies in this thesis show that in any case, a number of factors matter which lie in the context of the child, such as for example the teacher’s perception of the child’s behavior, the influence of other children on this perception and also the teacher’s attitude towards classifications. The danger of using the biomedical explanation model of behavior is that these (and other) context variables remain out of the picture and that this context is considered a given. As a result, contextual factors that contribute to the perception of deviant behavior and therefore also the solutions for it may be overlooked (Te Meerman, Batstra, Grietens & Frances, 2017).

A possible reason why the biomedical explanatory model is used so prominently by teachers (see Chapter 5) is that this explanatory model removes guilt in a situation that is stressful and difficult to escape for teachers (Jennings & Greenberg, 2009). Research shows that teachers develop stress as a result of behavioral problems in the classroom because they require time and investment from the teacher that is not always available (Thijs, Koome & Van der Leij, 2006). Conversely, stress among teachers leads to behavioral problems among pupils (Hamre, Pianta, Downer & Mashburn, 2008; Henricsson & Rydell, 2004). In Chapter 3 of this thesis, we saw that the number of children scoring above the clinical cut-off score of the behavior screening questionnaire is related to a
more negative perception of the other pupils in class. It is possible that if more children are perceived as problematic, teacher stress increases, which conversely causes teachers to perceive more pupils as problematic. This requires a careful approach to the ideal of inclusive education. If a teacher ends up in a negative spiral, chances of more and more children being considered deviant increase because the classroom context is so decisive and teachers have few opportunities to escape a negative spiral. The ideal of inclusive education can also go wrong in the sense that teachers increasingly regard more children as deviating from the norm. In its most extreme form, the ideal works counterproductively and will lead to more classifications.

Chapter 5 shows that ‘removal of guilt’ offers an important advantage to classification. This may be the reason why the biomedical model is so popular in education. It offers the opportunity to ‘mentally escape’ from a stressful educational system to pupils and teachers alike. This may also explain the increase in the number of psychiatric diagnoses/classifications (RVS, 2017).

Chapter 5 studied the added value teachers perceive from an ADHD classification in education. This was done because the school often sends out a signal, based on the perceptions and observations of teachers, about deviant behavior, which consequently leads to the first step towards a diagnostic process (Russell, Moore & Ford, 2016; Sax & Kautz, 2003). In this thesis we concluded that teacher perceptions, attitudes, and consequently perhaps actions too, are influenced by contextual factors and differ across teachers. Researchers may not take these context variables sufficiently into account when investigating the role of ADHD in the educational context. In accordance with our study, Bej (2016) notes that the teacher’s vision on pupil behavior, which behavior is seen as social or what a teacher understands by ‘discipline’, differs from teacher to teacher. This vision and conviction largely determine the decisions the teacher makes in daily professional practice (Tillery, Varjas, Meyers & Collins, 2010) and, more specifically, how he or she deals with problem behavior (Hastings, 2003).

### 7.6 Limitations to the research

This research has several limitations. For example, in the study on relative age effects, no explicit link was made between the teacher’s perception and the number of children who eventually received a classification or diagnosis. Because no control group was used in the study on the effect of the SWPBS program, we cannot be sure whether the observed improvement was indeed
due to the intervention. For Chapter 6, the research question was not entirely established a priori, but was only drawn up later based on the findings of the research in Chapter 5. In the introduction and conclusions, we elaborate on the difference between the social model and the medical model of differences in educational needs. We consciously use the concept of ‘context’, although the contextual aspects that we addressed in the studies are limited. Context naturally extends well beyond the teacher’s perception and the role of other children in the classroom.

7.7 Practical implications

This thesis started with the question of why inclusive education is not coming about properly and why there seems to be a big difference between the ideal on the one hand and the effect in practice on the other. In this chapter, the link is made with the biomedical view on children’s behavior. One recommendation from the present research is that, if the desire is to achieve more inclusive forms of education (as in the situation of the Netherlands ‘Education that Fits’ in Dutch: ‘Passend Onderwijs’), it is important to add alternative explanatory models for the behavior of children in the classroom, which take more account of factors in the pupil’s context, such as the teacher’s perception of relatively ‘young’ behavior (Chapter 3), teacher perception after implementation of a support approach (Chapter 4), and the attitude towards classifications (Chapter 5). If the desire is to increase normalization of child rearing problems (RVS, 2017), for example because more is known about the disadvantages of classifications for children (Batstra, Hadders-Algra, Nieweg, Van Tol, Pijl & Frances, 2012; Batzle, Weyandt, Janusis & DeVietti, 2010), there is an important lead in the context of the classroom and in educational practice, for example the teachers who indicate that they do not perceive any added value from a diagnosis (see Chapter 5). Such teacher attitudes may help to turn the page in the search for what the child ‘needs’ rather than what the child’s ‘condition’ is (Vehmas, 2010; Honkasilta, Vehkakoski & Vehmas, 2016). Teachers with these attitudes may be able to transfer their approach to other teachers and research can focus more on the approach of these teachers.

A second implication of the research in this thesis is the importance of teacher training and coaching. Chapter 4 shows that the training and coaching of teachers in the School-Wide Positive Behavior Support approach can positively influence teachers’ perceptions. This shows that with coaching, training,
and a positive classroom climate, steps towards more inclusive education can be made. The importance of training and education is also discussed in Chapter 5, which revealed the advantages of an ADHD classification in educational practice. A critical analysis of these benefits also shows that some of these advantages are based on circular reasoning. It is important to ensure that teachers become aware of this erroneous form of reasoning, as it may help them to keep the focus not only on the individual pupil, but also on the role of personal perception and the interactions within the classroom, and thus also in finding solutions in that context of the child. In short, one important recommendation is that teachers be given the space and time to develop through education and training. An important point for attention is that a distinction is made between teacher and school level in the choice of education and intended effects.

Various studies indicate that the school is the first place where psychiatric diagnoses are suggested (Moore, Russell, Arnell & Ford, 2017; Russell, Moore & Ford, 2016; Sax & Kautz, 2003). For the diagnostic process, it is very important to understand that teacher statements about pupil behavior must always be understood within the specific context of the classroom and school. This is relevant for clinical practice when a teacher is questioned as an informant in the diagnostic process, as well as when treatment options are considered. These should not only be aimed at the individual child, but also at the context of the classroom, the teacher and the school. Simply consulting the teacher within the diagnostic process by using questionnaires or telephone interviews is therefore not sufficient. Diagnostic observations in the context in which child behavior is perceived as problematic are needed in order to gain a deeper understanding of problems in the classroom.

The third implication for clinical practice is that a child-related classification in education is welcomed not only because an ‘explanation’ has been found for the behavior, but also because it is a way of calming the relationship between the parent and the teacher. It is therefore important to know, at the first sign of signals, why they emerge and for which problem classification (and later a diagnosis) is or should be a solution. The meaning that teachers assign to this diagnosis (is it intended to restore calm to the relationship with parents, to remove teacher guilt, to give the teacher the opportunity to deviate from the standard curriculum) is important. Are there other ways to achieve this than psychiatrically diagnosing a child?
7.8 Policy implications

This research shifts the focus from the individual child to the perception and attitudes of the teacher and the influence classmates and parents have in this respect. If politicians, administrators and policymakers are striving for more inclusive education and have the desire to ‘normalize’ more, this shift may also be one that takes place on policy level. Policies with a strong individual focus on children will lead to investments focused on the individual, for example psychiatric diagnostic procedures and behavior and other individual treatments. More attention to the importance of the context could lead to more investment in that context, for example in teacher training and coaching, other ways for teachers to bring a sense of calm to the contact with parents, investment in a positive classroom climate and more attention to the differences between schools and teachers. The context differs per school and per teacher, and this, therefore, requires a different approach per school, per teacher, and possibly also per neighborhood and municipality, towards more inclusive education. In this sense, it is recommended that the decentralized system of the Youth Act and the Inclusive Education Act (‘Education that Fits’ in Dutch: ‘Passend Onderwijs’), for all students are implemented optimally in the Netherlands.

Another important recommendation follows from the conclusions of this thesis. In the conclusions, we wrote about the role of the classification in ‘mentally escaping’. There is also another side to this coin. We noted in the research that when a teacher ends up in a negative spiral in the classroom, there is a chance that more and more children are perceived as problematic. One important implication for policymakers is therefore to actively make teachers aware for this negative spiral and give them opportunities to step out and to ask for help and support. Signals from teachers that things are not going well in the classroom should be taken seriously. Teachers must be optimally supported in this sort of situations.
7.9 Implications for research

In the research in the first three chapters of this thesis, a design was used which took into account that children are part of classes and classes are part of schools. In this way, we can chart differences between teachers and between schools, or may find that the difference between teachers is greater than between schools (as in Chapter 4). The thesis may also align with the recommendation to investigate how attitudes towards classifications influence daily educational practice (Chapter 5). Using multi-level analysis or N=1 studies more often may help to adequately model the dependence of observations within a cluster and to show that differences in the context matter. More research with multi-level analysis or N=1 studies are needed to investigate what does and does not work for which teachers in which contexts.