# Teachers as Disorder-Spotters: (In)decisiveness in assigning a Child's Hyperactivity, Impulsivity and/or Inattention to ADHD as the Underlying Cause

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**Abstract**

Their unique observational position in the classroom allows teachers to take on an informal role as disorder-spotter. By means of focus groups in four Flemish elementary schools, this study investigates teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to Attention-Deficit/Hyperactivity Disorder (ADHD) as the underlying cause. Results show that, when teachers talked about specific children who exhibited hyperactivity, impulsivity and/or inattention, they were, more often than not, decisive in their observation that ADHD was or was not the underlying cause of the child's behaviors. However, several child-related factors caused teachers to be indecisive about whether ADHD was indeed at the base of a specific child's hyperactivity, impulsivity and/or inattention.

**Keywords**

Disorder-spotter, teachers, ADHD, SEN children

## Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD), a psychiatric disorder characterized by abnormal levels of hyperactivity, impulsivity and/or inattention (American Psychiatric Association 2013), is diagnosed in about 6 to 7% of children worldwide (Willcutt 2012). While previously considered a North American phenomenon, European, African, and Arab countries have reported a rise in ADHD-prevalence from the 2000s on (Lusardi 2019), even though significant regional differences remain (see for example Akmatov et al. 2018; Malacrida 2004; Sax and Kautz 2003). The most common conceptualization of ADHD comes from a neurobiological perspective, which describes ADHD as caused by brain dysfunction (Wright 2012). Therefore, principal treatments for ADHD are pharmacological (Bachmann et al. 2017). Nevertheless, no objective biological markers for ADHD can be detected in the brain of an individual child (Te Meerman et al. 2017) and the diagnostic process of ADHD as a whole is largely based on subjective assessments of student behavior by parents and teachers (Gualtieri and Johnson 2005; Sayal, Letch, and Abd 2008).

Research on all steps of the diagnostic process of ADHD is highly relevant, since students with a medical diagnosis of ADHD are perceived as academically less able by teachers (Batzle et al. 2010; Ohan et al. 2008) and have a higher chance of school dropout (Fredriksen et al. 2014). Moreover, scholars have raised concerns about overdiagnosis of ADHD, which consists in 'identifying problems that were never going to cause harm or by medicalizing ordinary life experiences through expanded definitions of diseases' (Brodersen et al. 2018, p.1) and which leads to significant medical, pharmacological, and societal costs (Merten et al., 2017).

Teachers often play a crucial role in the identification of ADHD in students (DuPaul and Jimerson 2014; Sax and Kautz 2003). They have the opportunity to constantly compare a student's behaviors to the behaviors of other students in the classroom (Elder 2010; Salmon

and Kirby 2009). This unique observational position allows teachers to take on an informal role as 'disease-spotters' (Phillips 2006), and, by extension, also the task of spotting disorders, such as ADHD. Not much empirical research has been conducted on teachers' perspectives of and experiences in their role as disorder-spotter with regard to ADHD. Prior research has discussed the regional variability in teachers' willingness to take on the role of disorder-spotter, to refer students for assessment by a medical practitioner, and to suggest medical treatment to parents (Malacrida 2004; McMahon 2012; Wienen et al. 2019).

By means of focus groups in four Flemish elementary schools, this study investigates teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. We propose it is important to investigate teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD, since it is likely that their decisiveness plays a role in the information and recommendations they give to parents during the parent-teacher meetings Flemish schools organize a few times a year to discuss the child's academic progress. In Flanders, 2.19% of children in elementary education have been diagnosed with ADHD (Geerts, Heyninck, and Van den Broeck 2012) and research has indicated that childhood ADHD in Flanders brings about a significantly higher use of health care and worse academic outcomes, such as a higher chance of repeating a grade (De Ridder and De Graeve 2007). In the result section, we will discuss teachers' decisiveness and the nature of child-related factors that made teachers indecisive about whether ADHD was indeed at the base of a specific child's hyperactivity, impulsivity and/or inattention.

**Background**

Several North American studies have described how educational institutions were mandated to screen for potential behavioral and academic problems in students as early as the last decade of the 19th century (Petrina 2006; Singh 2006). To achieve this, non-medical staff were increasingly integrated into the detection of behavioral, emotional, and learning disorders,

particularly so in the case of ADHD (Conrad 1992, 2006). As such, teachers started taking on an informal role as 'disorder-spotters' (Phillips 2006). Additionally, in countries and regions where the Diagnostic and Statistical Manual of Mental Disorders (DSM) is used as the primary source for diagnostic criteria, teachers play another crucial part in the diagnostic process of ADHD: They are often asked by medical practitioners to fill out ADHD behavioral ratings regarding a child (American Psychiatric Association 2013).

Since no clear-cut test indicating the presence of ADHD in children is available, children's behaviors are primarily understood and evaluated by teachers in comparison to the behaviors of other children (Elder 2010). Teachers' fallibility in their role as disorder-spotter is therefore evident in the selectivity with which teachers would suspect ADHD in some students, but not in others (Kypriotaki and Manolitsis 2010). For example, teachers more often detected ADHD in students who are younger compared to their classmates (DuPaul et al. 2014; Elder 2010). It is not surprising then that parents, teachers, and medical practitioners are often not in agreement regarding the presence of ADHD in a child as an explanation for the child's hyperactivity, impulsivity and/or inattention (Gomez 2007; Wolraich et al. 2004).

Although not much empirical research has been conducted on teachers' perspectives of and experiences in their role as disorder-spotter with regard to ADHD, research has revealed regional variability in teachers' willingness to take on the role of disorder-spotter, to refer students for assessment by a medical practitioner, and to suggest medical treatment to parents (Malacrida 2004; McMahon 2012; Wienen et al. 2019). Gesser-Edelsburg and Boukai (2019) addressed the persuasive role Israeli teachers and school counselors played in the parents' decision-making about consulting a medical practitioner and medicating their child. Malacrida's (2004) research showed that Canadian teachers were quick to label a child with ADHD and press for medical treatment, while British teachers refused to do so. She proposed that Canadian teachers had few alternative forms of social control available to them in the

classroom and therefore, they were more willing to suggest a diagnosis and medical treatment to parents.

The variability in teachers' willingness to take on the role of disorder-spotter can be linked to teachers' understandings of and beliefs about ADHD (Kos, Richdale, and Hay 2006; McMahon 2012). Wright (2012) introduces two primary standpoints from which ADHD may be discussed. According to the neurobiological perspective, ADHD is a neurological dysfunctionality that is detectable by enhanced techniques. Research has demonstrated that teachers who understood ADHD from a neurobiological perspective and as such as a condition with a somatic origin, evaluated the medical diagnosis of ADHD as a logical explanation for undesirable behaviors and disappointing academic achievement (Wienen et al. 2019). They found that the diagnosis was helpful, since it removed blame for behaviors from students, parents, and teachers and put it with a pathological condition (Tait 2003). When the different actors involved have dispelled notions of blame, according to researchers, only then there is the possibility of collaboration (Wienen et al. 2019). Furthermore, teachers mentioned that diagnosis by a medical practitioner opened up the possibilities of pharmacological treatment and the right to additional support for the child (Wienen et al. 2019).

A second perspective discussed by White (2012) is the social constructionist perspective, which she defines as 'an approach to the exploration of ADHD 'meanings', the social actors who may be involved, and their social reactions to it' (p.9). Social constructionists interpret the rising number of ADHD diagnoses worldwide (Lusardi 2019) as part of the process of medicalization. Medicalization is the process in which non-medical problems are increasingly defined in medical terms and treated as medical conditions (Conrad 1975; Petrina 2006). Social constructionists have pointed out that the neurobiological perspective is plagued by the problem of reification (Hyman 2010): Although no innate brain defect can be detected (Te Meerman et al. 2017), in the process of reification a particular kind of behavior, in this case,

behavior that is characterized by hyperactivity, impulsivity and/or inattention, that in itself lacks objective qualities, is explained by a supposed concrete neurobiological defect (Wienen et al. 2019). As did a small number of the interviewed teachers in the research of Wienen and colleagues (2019), in Malacrida's research (2014), British teachers assumed a social constructionist perspective and showed a strong antipathy towards the medicalization of children's behaviors.

In this study, we aim to investigate teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. To our knowledge, no research has been conducted regarding teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. We will investigate teachers' decisiveness in their observation that ADHD is, or is not, the underlying cause of a child's hyperactivity, impulsivity and/or inattention as well as the nature of child-related factors that made teachers indecisive about whether ADHD was indeed at the base of a specific child's hyperactivity, impulsivity and/or inattention.

**Data and Methods**

The data for this research were collected in elementary schools in East-Flanders, a province in Flanders, the Dutch-speaking part of Belgium, as part of an international comparative project. The project's main objective was to understand the school, teacher, and student characteristics associated with the identification of ADHD in students by school actors and the use of pharmacological treatments for ADHD in two distinct school systems in Flanders and Québec. Before advancing with the data collection, the research project was approved by the Ethics Committees of the faculty of Political and Social Sciences of Ghent University and the University of Québec in Chicoutimi.

Compared to the percentages of ADHD diagnoses worldwide, Flanders scores on the low side with a diagnosis prevalence of 2.19% in children in elementary education (Geerts,

Heyninck, and Van den Broeck 2012). Most Flemish children are diagnosed by a medical practitioner, such as a child psychiatrist or a physician, outside of the school setting. The decision to consult a medical practitioner lies with the parents. However, also after the parents have decided to consult a medical practitioner, teachers play a crucial part: They are often asked by clinicians to fill out ADHD behavioral ratings regarding a student (American Psychiatric Association 2013). Generally, in Flanders, children who have obtained a diagnosis by a medical practitioner, attend regular schools.

We conducted focus groups in four elementary schools in the fall of 2018, reaching 23 teachers in total. The participating schools were randomly selected based on a list of stratified characteristics, such as their socioeconomic composition, location, and size. The focus groups lasted between 60 and 90 minutes and were recorded, but not filmed. The specific time and place were chosen by the teachers. A consent form informed the teachers of the research goal of the project and the voluntary nature of their participation. Furthermore, the participants were assured that their data would be kept in a secure place to ensure the confidentiality of the data and all data output would be made anonymous.

The question protocol for the focus groups was constructed in tight collaboration of the authors of this paper and around three research objectives. Firstly, we aimed to understand why and how teachers detected ADHD in children and which actions they undertook when they did. Secondly, we aimed to understand how teachers treat and talk about students with ADHD. Thirdly, we aimed to understand teachers' attitudes about ADHD and the intake of ADHD medication. Specifically, teachers were asked to write on post-its and discuss whatever words came to mind when they thought about ADHD. Furthermore, they were asked to talk about a time when they had a child in their classroom with an ADHD diagnosis and about a time when they had a child in their classroom without an ADHD diagnosis who exhibited behaviors that they thought could be indicative of ADHD. Finally, they were asked

which actions, if any at all, they undertook when they suspected ADHD in a child and how they evaluated the use of medication for ADHD.

We will refer to the four participating schools as the Spring School, the Summer School, the Autumn School, and the Winter School. At the time of the focus groups, the Summer school had the lowest percentage of children with a low educated mother (16%), the lowest percentage of children who did not speak the official educational language, Dutch, at home (13%), and the lowest percentage of children who received a school allowance (17%) (Agency for Educational Services, 2018). The Autumn school had the highest percentages of the participating schools on all three accounts (respectively 44%, 44%, and 40%). The ratio preschool/elementary school of teachers who participated in the focus groups differed from school to school, with the Spring School having the lowest ratio (1:4) and the Autumn School the highest (3:1). We only found female teachers prepared to share their experiences with ADHD in the classroom. With a percentage of 82.3 female teachers in Belgian elementary education (OECD, 2017), this could be expected. In all schools, the participating teachers presented a good mix with regard to years of work experience in an educational setting and all teachers said they had experience with ADHD in the classroom. In the Summer school, two teachers were mothers of a child who was diagnosed with ADHD by a medical practitioner. We summarized the information regarding school and participant characteristics in Table 1.

[Table 1 near here]

The first author of this paper conducted the focus groups and was responsible for the verbatim transcriptions of the recordings of the focus groups, the analysis of the verbatim transcriptions, and the translation of the quotes used in this paper from Dutch to English. The transcriptions of the focus groups were analyzed in the tradition of conventional content analysis by means of the software package NVivo 12. Conventional content analysis is generally used when a study aims to describe a phenomenon and when existing theory or

research literature on this phenomenon is limited (Hsieh and Shannon 2005). Unlike other qualitative methods, conventional content analysis helps with reducing the amount of material: The researcher focuses on aspects that relate to the overall research question (Schreier 2012). To find answers to our research question, we focused on teachers' statements when they were asked to think back about a time when they had a child in their classroom that exhibited behaviors that they thought could be indicative of ADHD.

To ensure systematics in the analysis process, we rigorously followed the series of steps of conventional content analysis as described by Schreier (2012). Since the research literature on the phenomenon of teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD is limited, the categories and names for the categories were not preconceived, but rather emerged from the data, as is customary with conventional content analysis (Kondracki, Wellman, and Amundson 2002). With conventional content analysis, code development, and application have to be performed separately (Schreier 2012). In practice, this means that we generated a coding frame in accordance with the research question during a pilot phase and that the coding frame did not change during the main analysis phase. Each child that teachers talked about was coded under one of two main categories: *Decisiveness in specific cases* and *Indecisiveness in specific cases*. Often for one child, multiple subcategories applied. In Table 2, we summarized the coding framework for each school by reporting on the number of specific cases that could be coded under each of the main categories and the subcategories that were found regarding these specific cases within each school. The main categories are linked to teachers' understandings and beliefs about ADHD and their perception of their capability to detect ADHD in children. To ensure the reliability of the analyses, the coding process was repeated multiple times, until no new codes were found or no new information could be coded. During the analyses, the researcher in charge of the Flemish focus groups

constantly discussed findings with the Québec researchers involved in the comparative research project.

[Table 2 near here]

## Results

### *Teachers as Disorder-Spotters*

To ask about teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause is to ask if they take on the role of disorder-spotter in the first place and which understandings of and beliefs about ADHD underlie their motivation to do so. Overall, teachers in this study had a neurobiological perspective on ADHD: They considered ADHD as a medical condition that could be determined by a medical practitioner. Some teachers suggested a genetic cause, others compared ADHD to a physical disability. Teachers would take the initiative to inform the parents of the child's behaviors and although they found that it was 'not up to them to diagnose', these information moments with parents were meant to guide parents in the direction of consulting a medical practitioner, under the assumption that a consultation would result in a medical diagnosis. In the next quote, Anna and Nadia (preschool teachers, Summer School) discussed how they handled a conversation with parents of a child that they suspected had ADHD. As teachers, they did not directly suggest the diagnosis of ADHD, rather, they suggested that the teacher and parents in collaboration should try to find out the origins of the child's behaviors.

> Anna: We can't name it, we can't say: "I suspect ADHD".
>
> Nadia: We don't do that.
>
> Anna: We never do that, we never say it, we give concrete examples and we say: "We have to try to find out why he behaves like this".

### *Teachers' Decisiveness in assigning a Child's Hyperactivity, Impulsivity and/or Inattention to ADHD as the Underlying Cause*

In three of four schools, when teachers talked about specific children who exhibited hyperactivity, impulsivity and/or inattention, they were, more often than not, decisive in their observation that ADHD was, or in a few cases was not, the underlying cause of the child's behaviors. When teachers of the Spring, the Summer, and the Winter School spoke about their capability to detect ADHD in children in general terms, they said they "just know" when ADHD was the underlying cause of a child's hyperactivity, impulsivity and/or inattention and that years of experience in an educational environment helped them to decide on the presence or absence of ADHD when being confronted with hyperactivity, impulsivity and/or inattention in a child.

Aside from talking to parents or guardians about their child's hyperactivity, impulsivity and/or inattention and consulting the Counsel for Student Guidance, teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD manifested itself in a change of expectations for the child's behaviors and an implementation of educational treatments. When teachers suspected a child had ADHD, they would adjust their expectations of the child's behaviors. Nicole (first year, Spring School) stated: "If the child has ADHD, I can't always demand that he sits nice and quiet". Furthermore, when teachers suspected a child had ADHD, they implemented educational treatments, as if "the child was diagnosed". These educational treatments included dividing tasks into smaller pieces, giving the children a fixed place in the classroom, and providing a separate space where children could settle down if needed. These findings show that ADHD labeling by teachers has practical, real effects for the teacher and children in the classroom.

***Teachers' Indecisiveness in assigning a Child's Hyperactivity, Impulsivity and/or Inattention to ADHD as the Underlying Cause***

Only in the Autumn School, when teachers talked about specific children who exhibited hyperactivity, impulsivity and/or inattention, they were, more often than not, indecisive in their observation that ADHD was or was not the underlying cause of the child's behaviors. Teachers

in this school explicitly agreed with each other that they generally lacked the expertise to assign a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. They mentioned their non-medical training and perceived a diagnosis by a medical practitioner as 'the only way to know for sure' and to take appropriate action in the classroom. Annelies (preschool teacher, Autumn School) perceived the diagnosis as the end of a period of doubt and therefore as a relief: "It is an endpoint for you as a teacher, that you know: "Ok", it's a relief that you know: "This is it", and we can all deal with it in this or this way." Hence, for teachers in the Autumn School, the diagnosis not only erased the teacher's doubts about the causes of the child's hyperactivity, impulsivity and/or inattention, it also helped them with the decision which educational treatments to implement.

Several child-related factors made teachers in all schools indecisive about whether a specific child's hyperactivity, impulsivity and/or inattention were caused by the disorder and not by "something else". Teachers in this study mentioned several factors outside of ADHD that, in their opinion, were possibly at the basis of a child's hyperactivity, impulsivity and/or inattention. In the next paragraphs it will become clear that, according to these teachers, children's hyperactivity, impulsivity and/or inattention can be caused by ADHD and thus by a medical condition, but could also be caused by a child's young age, problematic home situation, chaotic upbringing, the possible presence of another disorder, and a high IQ which results in boredom in the classroom. Finally, teachers in the Summer School discussed how mutual adjustments on the child's and teacher's part during the first weeks of the school year complicated the detection of ADHD in the child.

Generally, teachers were cautious to assign a child's hyperactivity, impulsivity and/or inattention to ADHD at preschool age. Teachers stated that children needed time to develop and that they would "possibly outgrow these behaviors". Nevertheless, preschool teachers also said that they were "never surprised" when children were later diagnosed by a medical

practitioner and they made sure that the parents of preschoolers who exhibited hyperactivity, impulsivity and/or inattention were informed about these behaviors to prepare the parents to consult a medical practitioner in case of persistent behavioral and learning problems in their child. In the quote below, Machteld (preschool teacher, Winter school) described how she has difficulties convincing parents that their child's behaviors in the classroom might be problematic, since there are no standardized tests or grades in preschool to support her claims. Mieke (second year) agreed and stated that grades indeed do help in communication with parents.

> Machteld: You can show them drawings and compare drawings with those of other children, how they do it, only a drawing, is it colored quickly or is it colored very minuscule. Those things you can, but you always have to compare to another, because I can't say: "This is not colored very well". Who says it isn't well-colored, you have to be able to compare.
>
> Mieke: We can substantiate it better by means of grades.

According to teachers in this study, a child's hyperactivity, impulsivity and/or inattention could be caused by social circumstances in the home environment of the child. Children's upbringing could result in a child exhibiting hyperactivity, impulsivity and/or inattention, for example, when parents did not succeed in setting clear boundaries regarding their child's behaviors. Furthermore, teachers were doubtful about the presence of ADHD when they were confronted with hyperactivity, impulsivity and/or inattention in children who also had a problematic home situation. In the next quote, Nicole (first year, Spring School) evaluated these circumstances of a problematic home situation as a possible cause for these behaviors.

> His dad was back in the picture for a while and then he disappeared again; very frustrating for that child and eventually, you don't know anymore and you have a very hyperactive child that doesn't perform at school and then you actually wonder, one

intersects with the other, what is really the fundamental cause of what makes that he has difficulties learning, that is a big question mark.

Hyperactivity, impulsivity and/or inattention could also be indicative of other medical behavioral and learning disorders. Teachers stated that they had difficulties allocating hyperactivity, impulsivity and/or inattention to ADHD, since the behaviors could also be the result of a crossing of other disorders. Lieve (fourth year, Autumn School) stated: "To find out then what is ADHD, what is ADHD, because yes, they very much overlap and then I always find it difficult." In this regard, teachers in the Spring School referred to a child whose hyperactivity, impulsivity and/or inattention could, according to them, solely be allocated to the disorder of ADHD, as being "a pure case of ADHD", a term that is also frequent in scientific studies investigating the comorbidity of ADHD (see for example Kadesjö and Gillberg 2001; Rubia et al. 2009).

Lieve also talked about her doubts regarding the hyperactivity, impulsivity and/or inattention of a child in her classroom that, according to her, could also be caused by boredom. She perceived the child in question as being highly intelligent and therefore, boredom in the classroom possibly caused the child to behave the way it did. Her cautiousness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause in a child that she considered as highly intelligent, resonates within educational research. Studies warn against misdiagnosis of giftedness and ADHD, because of an overlap of behavioral symptoms such as high activity levels, attention difficulties, and impulsivity (Webb, Amend, and Webb 2005).

Finally, in the Summer School, teachers discussed how mutual adjustments on the child's and teacher's part during the first weeks of the school year complicated the detection of ADHD in the child. Anna (preschool teacher) stated that the child's hyperactivity, impulsivity and/or inattention was most apparent in the first week of the school year and therefore, ADHD

could be best detected during this time. In this first week, the teacher had not had the time to implement any treatment interventions in the classroom to accommodate children with hyperactivity, impulsivity and/or inattention or to adjust their expectations about the child's behaviors, and the child itself had not had the time to adjust its behaviors to the expectations and circumstances of school life.

> And actually, that is the moment the child gives a lot of signals because, if it is ADHD or something else, after a few weeks they adjust and then it comes less and you also adjust, unconsciously too, so you, yeah, and then the problem is not that big anymore, but actually that first, actually you have to think back: "How was that first day, that first week, what struck me then".

**Discussion**

In this study, by means of focus groups in four Flemish elementary schools, we investigated teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. In three of four schools, when teachers talked about specific children who exhibited hyperactivity, impulsivity and/or inattention, they were, more often than not, decisive in their observation that ADHD was or was not the underlying cause of the child's behaviors. However, the presence of several child-related factors such as a child's young age, problematic home situation, chaotic upbringing, the possible presence of another disorder, and a high IQ which results in boredom made them indecisive about the cause of hyperactivity, impulsivity and/or inattention in specific children they talked about.

Multiple implications about the detection of ADHD in children by teachers follow from our results. Firstly, teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD might be more school-related than teacher-related. Amongst each other, teachers of the same school were largely in agreement on the presence or absence of ADHD in specific children, and on the factors that made detection difficult. In one school,

teachers explicitly agreed with each other that they generally lacked the expertise to assign a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause. The Autumn School had the highest percentages of children with a low educated mother, of children who did not speak the official educational language at home (i.e., Dutch), and of children who received a school allowance (Agency for Educational Services 2018). It is possible that teachers in this school were overall less decisive, because they encountered more children in social circumstances that, according to teachers, could cause hyperactivity, impulsivity and/or inattention outside of ADHD. Furthermore, taking on the role of disorder-spotter might be no priority to these teachers and is possibly complicated by the language barrier between the teacher and the parents.

Secondly, teachers in this sample are caught up in the problem of reification (Hyman 2010): They explain behavior that is characterized by hyperactivity, impulsivity and/or inattention, that in itself lacks objective qualities, by a supposed concrete neurobiological defect. It is important to note that teachers in this study distinguish between causes of ADHD and causes of hyperactivity, impulsivity and/or inattention. According to these teachers, ADHD has a neurobiological cause, which in turn causes hyperactivity, impulsivity and/or inattention, however, these features do not necessarily have to be caused by ADHD. When phrased inversely, teachers in this sample were more likely to explain hyperactivity, impulsivity and/or inattention with ADHD when other factors that, according to them, could cause these features to their knowledge were absent. Two implications arise. Firstly, whether or not a child is suspected of ADHD by his/her teacher depends on the teacher's perceptions about what factors outside of ADHD could cause hyperactivity, impulsivity and/or inattention. Secondly, a teacher might not have full knowledge of the child's situation and might miss the presence of a factor outside of ADHD that could cause a child to exhibit hyperactivity, impulsivity and/or inattention.

~~One~~ Limitations of the design of this study must be discussed. During the focus groups, teachers were not asked directly how they would describe their decisiveness in general, instead, they were asked to speak about the hyperactivity, impulsivity and/or inattention of specific children. It would have been interesting to know how teachers evaluated their decisiveness and which factors they thought influenced their general levels of decisiveness. Furthermore, the question protocol for the focus groups was exclusively concentrated around ADHD, while teachers might also serve as disorder-spotters for other behavioral and learning problems. As such, this study was not able to present a complete image of Flemish teachers' decisiveness in their role as disorder-spotter.

Finally, it must be noted that only one researcher was in charge of the analyses of the verbatim transcripts of the focus groups. Some studies on qualitative methods describe how the reliability of the analysis can be ensured by having multiple members of a research team perform the coding process separately before calculating the inter-rater reliability (IRR) to assess the extent to which their codes overlap (Gwet, 2014). We cannot present a reliability measurement, however, the coding process was repeated several times and thoroughly discussed with the Québec researchers of the comparative research project.

We conclude this paper with directions for future educational practice and research. We have stressed the importance of researching teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause, next to their willingness to take on the role of disorder-spotter, since it is likely that teachers' decisiveness plays a role in the information and recommendations they give to parents. Furthermore, when teachers have assigned the child's behavior to ADHD as the underlying cause and the label of ADHD is applied to the child, the effects of this label according to educational researchers are potentially far-reaching, since teachers' academic perceptions and expectations are considerably lower for students with a label of ADHD (Batzle et al. 2010; Ohan et al. 2008).

We recommend that teachers are made aware of and reflect on the mechanisms behind their practices as disorder-spotters that were revealed in this study, and their personal involvement in relation to the academic and social problems in children who exhibit hyperactivity, impulsivity and/or inattention (Rafalovich 2005). Future research should further assess the association between teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD and the actual numbers of medical diagnoses. Finally, a study with a larger sample size should aim to identify which contextual and individual characteristics are related to teachers' decisiveness in assigning a child's hyperactivity, impulsivity and/or inattention to ADHD as the underlying cause.

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labeling and medicalization of students' behaviors, attitudes and difficulties, with a special interest for all that is related to the diagnosis of Attention deficit hyperactivity behavior (ADHD).

***Mieke Van Houtte***, Prof. Dr., is full professor and head of the research team CuDOS (Department of Sociology, Ghent University, Belgium). Her research interests cover diverse topics within the sociology of education, particularly the effects of structural and compositional school features on several diverse outcomes for students and teachers, and sexual minorities.

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**Table 1**

School and participant characteristics

| | Spring School | Summer School | Autumn School | Winter School |
|---|---|---|---|---|
| Percentage of children with low educated mother | 26 | 16 | 44 | 27 |
| Percentage of children who do not speak Dutch at home | 28 | 13 | 44 | 16 |
| Percentage of children who receive a school allowance | 35 | 17 | 40 | 35 |
| Ratio preschool/elementary school of participating teachers | 1:4 | 5:3 (+ one teacher who taught both) | 3:1 | 2:3 |
| Range of years of experience of participating teachers | 3 - 37 | 2 - 33 | 3 - 30 | 6 - 31 |

**Table 2**

Summary of coding framework per school

| | Spring School | Summer School | Autumn School | Winter School |
|---|---|---|---|---|
| *Decisiveness in specific cases* | | | | |
| Number of specific cases | 7 | 5 | 1 | 4 |
| Subcategories | ◦ Persuasion of others<br>◦ Change in expectations of behaviors<br>◦ Child not responsible for behaviors<br>◦ Referred to child as having ADHD without diagnosis<br>◦ Behaviors indicative of ADHD | ◦ Persuasion of others<br>◦ Child not responsible for behaviors<br>◦ Referred to child as having ADHD without diagnosis<br>◦ Behaviors indicative of ADHD | ◦ Persuasion of others<br>◦ Behaviors indicative for ADHD | ◦ Persuasion of others<br>◦ Child not responsible for behaviors<br>◦ Referred to child as having ADHD without diagnosis<br>◦ Behaviors indicative of ADHD |
| *Indecisiveness in specific cases* | | | | |
| Number of specific cases | 2 | 3 | 3 | 0 |
| Subcategories | ◦ Home situation possible cause for behaviors<br>◦ Upbringing possible cause for behaviors | ◦ Home situation possible cause for behaviors<br>◦ Possible unknown cause for behaviors<br>◦ Also behaviors not indicative of ADHD<br>◦ Behaviors less indicative of ADHD after mutual adjustments | ◦ Home situation possible cause for behaviors<br>◦ Possible unknown cause for behaviors<br>◦ Attachment problems possible cause for behaviors<br>◦ High IQ possible cause for behaviors | |