Dilemmas in child protection
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Deciding on child maltreatment: A literature review on methods that improve decision-making


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Abstract
Assessment and decision-making in child maltreatment cases is difficult. Practitioners face many uncertainties and obstacles during their assessment and decision-making process. Research exhibits shortcomings in this decision-making process. The purpose of this literature review is to identify and discuss methods to overcome these shortcomings.
We conducted a systematic review of the published literature on decision-making using PsychINFO and MEDLINE from 2000 through May 2014. We included reviews and quantitative research studies that investigated methods aimed at improving professional decision-making on child abuse and neglect in child welfare and child protection.
Although many researchers have published articles on decision-making including ideas and theories to improve professional decision-making, empirical research on these improvements is scarce. Available studies have shown promising results. Structured decision-making has created a greater child-centred and holistic approach that takes the child’s family and environment into account, which has made practitioners work more systematically and improved the analysis of complex situations. However, this approach has not improved inter-rater agreement on decisions made. Shared decision-making may improve the participation of parents and children and the quality of decisions by taking client treatment preferences into account in addition to scientific evidence and clinical experience.
A number of interesting developments appear in recent research literature; however, child welfare and child protection must find additional inspiration from other areas, e.g., mental health services, because research on decision-making processes in child welfare and child protection is still rare.
1. Introduction

Assessing whether child abuse or neglect actually occur and deciding on interventions to stop child maltreatment and to diminish its consequences is difficult due to the dynamics of families. Problems often change rapidly, while assessment procedures can be lengthy. Information is often lacking or contradictory. Parents and children do not always cooperate because they may not be aware of their problems or are afraid of a practitioner’s power to remove their children (Forrester, Kershaw, Moss, & Hughes, 2008; Munro, 1999). Informants, such as a child’s teacher or family doctor, may provide divergent information because they perceive the subtle signs of child maltreatment differently (Munro, 2008).

Many empirical studies show the shortcomings of professional decision-making in child and youth care and child protection (for a survey, see Garb, 1998; 2005). Practitioners tend to make intuitive decisions, which makes them vulnerable to mistakes. Practitioners may overlook relevant information, attach too much importance to irrelevant details or be prone to tunnel vision, a tendency to be biased to information that confirms their previous judgments (Gambrill, 2005; Garb, 1998; 2005; Munro, 1999; 2008; Stanley, 2013). Munro (1998) found that practitioners do not easily revise their opinion. Their first impression of a family influences their reaction to new information. Information consistent with their first impression is accepted easily and not reviewed critically, but practitioners deny information that contradicts their first impression. Practitioners react especially to information that is recent, vividly or emotionally laden; they also use spoken information more easily than written information (Munro, 1998).

Practitioners are not especially familiar with utilising theories on child development, child psychopathology and parenting during their assessment and decision-making. Knowledge about ‘what works’ (i.e., knowledge about effective interventions) is not widespread. Instead, individual preferences and opinions influence practitioners’ decisions (Arad-Davidzon & Benbenishty, 2008; Berben, 2000; De Kwaadsteniet, 2009; Gambrill & Shlonsky, 2000; Garb, 2005; Osmo & Benbenishty, 2004; Schuerman, Rossi, & Budde, 1999; Ten Berge, 1998). As a consequence, decisions may be based on a biased image that does not fit both the strengths and weaknesses of a family and the proposed intervention may not fit the problems families experience.

In addition, practitioners do not always engage parents and children in their decision-making process (Baecke et al., 2009; Schreiber, Fuller, & Paceley, 2013). Practitioners often experience a conflict between their role of ensuring child safety, which includes the possibility of out-of-home placement, and their role in supporting families to overcome their problems. Practitioners reduce the tension between those roles by focusing on the forensic aspects of their work (i.e., gathering evidence to establish child maltreatment) rather than engaging parents in the process of behaviour change (Trotter, 2006). Parents often experience a sense of fear during their interactions with child welfare or child protection, and their fears have a major impact on the worker–client engagement process (Kriz, Slyter, Iannicelli, & Louri, 2012).

As a result of these shortcomings, several problems may occur during the assessment and decision-making process. First, children may not be protected against further child maltreatment and families may not receive effective care. When interventions are not suited to the problems that families face, the problems may not be remedied or even escalate and families may need repeated help. Second, families may end interventions prematurely because they do not feel listened to, the intervention does not work or they are not motivated for the type of intervention that was offered.

Another problem is that practitioners disagree, sometimes strongly, regarding important
judgments and decisions (Berben, 2000; Britner & Mossler, 2002; Gold, Benbenishty, & Osmo, 2001; Munro, 2008; Schuerman, Rossi, & Budde, 1999; Ten Berge, 1998; Van Montfoort, 2004). The reliability, validity and accuracy of clinical judgment prove to be consistently low (Herman, 2005; Herman & Freitas, 2010). Under difficult circumstances (e.g., missing or contradictory information), and due to limited cognitive resources, practitioners’ information processing may be compromised. Although some mistakes (i.e., false positives, children deemed at risk and taken into care even though they might have been left safely with their parent; or false negatives, children not deemed at risk though becoming injured at a later point in time) due to a lack of information or due to the complexity of the available information seem inevitable (Munro, 1996), other mistakes might be avoided if practitioners carefully consider available information and critically judge their own opinions and experiences (Gambrill, 2005).

The Council of Europe poses that “social services for children and families should establish the overt goal that the best interest of the child be the primary consideration. Children have the right to access services in their best interests” (Recommendation CM/Rec 2011: 12; p. 3). Children and families also have the right to participate in social service delivery, both individually and as a group. Another right children have is a right to protection (Recommendation CM/Rec 2011: 12). An effective assessment and decision-making process is a necessary condition to provide protection and effective care and reach successful outcomes for children and their families.

This literature review aims to investigate the evidence for effective assessment and decision-making in child welfare and child protection. According to several guidelines on child and adolescent disorders, evidence-based assessment and decision-making can be recognised by three criteria: 1. research results and empirically sound theories about normal development and psychopathology are used to guide the assessment process; 2. practitioners use psychometrically strong tools during the assessment process; and 3. the entire assessment and decision-making process is evaluated empirically (Evans & Youngstrom, 2006; Fletcher, Francis, Morris, & Lyon, 2005; Klein, Dougherty, & Olin, 2005; McMahon & Frick, 2005; Ozonoff, Goodlin-Jones, & Solomon, 2005; Pelham, Fabiano, & Massetti, 2005; Pliszka & AACAP Work Group on Quality Issues, 2007; Silverman & Ollendick, 2005; Youngstrom, Findling, Youngstrom, & Calabrese, 2005; Youngstrom, Freeman, & McKewen Jenkins, 2009). This paper focuses on decision-making methods: Which methods improve individual decision-making regarding child maltreatment cases in child welfare and child protection? The objective of this review is to identify how these methods contribute to effective care and protection for parents and children experiencing child maltreatment. Methods can be defined as frameworks, procedures, protocols, and instruments (checklists, questionnaires) that support assessment or decision-making.

2. Methods
2.1 Search strategy
We conducted a literature search for meta-analyses, reviews and empirical research studies on the effectiveness of assessment and decision-making methods. The databases of PsychINFO and MEDLINE were searched for relevant studies using combinations of the following search terms: measurement, assessment, (structured/diagnostic/shared) decision-making, clinical judgment, client treatment matching, treatment planning, client participation, child maltreatment, child abuse, child neglect, child welfare, youth services, youth care, and child protection/child protective services.
2.2 Study inclusion and exclusion criteria

The online MEDLINE search yielded 3,712 articles, and the PsychINFO yielded 3,898 articles. The overall search included 7,610 articles. Duplicate articles were excluded from subsequent searches (see Fig. 1). Included studies were limited to children and youth (0–18 years) or parents. The main subject of the article had to be decision-making on child maltreatment. Studies about medical decision-making, youth delinquency or physical or mental disabilities were excluded. Views on decision-making change over time. We argue that the review should reflect the current practice of child welfare and child protection practitioners, so only English and Dutch-language studies published from January 2000 to May 2014 were included. Articles that did not report research findings (e.g., theoretical articles and handbooks) or that reported qualitative findings were excluded. Articles about the reliability and validity of a single instrument and the effectiveness of interventions were also excluded. Studies reporting reliability and validity of instruments comparing several instruments or using one instrument to using no instruments at all were included because these would enable us to make a conclusion on the best available method for decision-making. Studies reporting the results regarding a single instrument would not allow for such conclusions.

We reviewed the titles and abstracts of all articles found, which resulted in 132 full text articles for additional review. The first author screened the full text articles according to the inclusion and exclusion criteria. A total of 115 articles were further excluded because they did not report research data on a decision-making method but were instead mainly theoretical articles about ways to improve decision-making processes. The final literature search included 17 studies.

![Fig. 1. Description of the systematic review](image-url)
Some reviews have studied the same issues and may have overlap in the included studies. Barlow, Fisher, and Jones (2012) included 16 studies on risk assessment instruments but none of the other studies that were included in the current review. Shlonsky and Saini (2011) included the studies of Berzin, Cohen, Thomas, and Dawson (2008) and Sundell and Vinnerljung (2004) in their review. In the discussion we will return to the consequences of this overlap for our final conclusions.

Some reviews included studies before 2000. The Barlow et al. (2012) study included studies from 1970 to 2011; Vis, Strandbu, Holtan, and Thomas (2011) included studies from 1999 to 2009; and Léveille and Chamberland (2010) included all studies on the Framework for the Assessment of Children in Need and their Families, which were published between 2003 and 2009. The other reviews did not specify their inclusion period.

3. Results
3.1 Description of studies
Table 1 provides a brief description of the studies that met the inclusion criteria. Included were 17 studies, of which four were systematic reviews and one was an unsystematic review; 12 single studies were also included. Several themes emerge from the studies. Some studies focus on the content the practitioner should decide on, i.e., a structuring of the thinking processes of the practitioner. This theme can be divided in two subthemes: structured decision-making models that focus on the whole decision-making process, and risk assessment instruments that focus on part of the assessment process (i.e., assessment of future risk of child maltreatment). Other studies focus on how the practitioner should treat families. This theme can be separated into two subthemes: shared decision-making that focuses on the dialogue between the practitioner and family and that aims to share responsibility between practitioner and family on the decisions made, and family group decision-making that empowers families to make their own decisions. The results are clustered according to these four subthemes.
**Table 1. Summary of studies examining decision-making methods**

<table>
<thead>
<tr>
<th>Study</th>
<th>Subject</th>
<th>N</th>
<th>Study design</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structured decision-making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bartelink, Van Yperen, Ten Berge, De Kwaadsteniet, &amp; Witteman (2014)</td>
<td>ORBA method</td>
<td>80 practitioners judging each 4 vignettes</td>
<td>Vignette study</td>
</tr>
<tr>
<td>De Kwaadsteniet, Bartelink, Witteman, Ten Berge, &amp; Van Yperen (2013)</td>
<td>ORBA method</td>
<td>160 case records</td>
<td>Pre- and post-test</td>
</tr>
<tr>
<td><strong>Risk assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baumann, Law, Sheets, Reid, &amp; Graham (2005)</td>
<td>Actuarial risk assessment</td>
<td>Study 1: 102 practitioners</td>
<td>2 randomised trials and a field study</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Study 2: 968 families</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Study 3: 1,199 child protection investigations</td>
<td></td>
</tr>
<tr>
<td>Bolton &amp; Lennings (2010)</td>
<td>Actuarial and dynamic risk assessment</td>
<td>3 practitioners judging each 50 vignettes</td>
<td>Vignette study</td>
</tr>
<tr>
<td>Herman (2005)</td>
<td>Actuarial risk assessment</td>
<td>Not specified</td>
<td>Secondary analysis</td>
</tr>
</tbody>
</table>
Table 1. Summary of studies examining decision-making methods (continued)

<table>
<thead>
<tr>
<th>Study</th>
<th>Subject</th>
<th>N</th>
<th>Study design</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shared decision-making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antle, Christensen, Van Zyl, &amp; Barbee (2012)</td>
<td>Solution-focused therapy</td>
<td>4,559 public child welfare cases</td>
<td>Correlation study</td>
</tr>
<tr>
<td>Connell, Dishion, Yasui, &amp; Kavanagh (2007)</td>
<td>Motivational interviewing</td>
<td>998 students ages 11-17 years</td>
<td>Randomised controlled trial</td>
</tr>
<tr>
<td>Dishion, Nelson, &amp; Kavanagh (2003)</td>
<td>Motivational interviewing</td>
<td>71 families</td>
<td>Randomised controlled trial</td>
</tr>
<tr>
<td>Dishion et al. (2008)</td>
<td>Motivational interviewing</td>
<td>731 mother-child dyads</td>
<td>Randomised controlled trial</td>
</tr>
<tr>
<td>Lee &amp; Ayón (2004)</td>
<td>Client-worker relationship</td>
<td>100 families</td>
<td>Correlation study</td>
</tr>
<tr>
<td>McLendon, McLendon, Dickerson, Lyons, &amp; Tapp (2012)</td>
<td>Parent participation</td>
<td>Not specified</td>
<td>Review</td>
</tr>
<tr>
<td>Vis, Strandbu, Holtan, &amp; Thomas (2011)</td>
<td>Shared decision-making and Family group decision-making (in particular child participation)</td>
<td>21 studies</td>
<td>Systematic review</td>
</tr>
<tr>
<td><strong>Family group decision-making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berzin, Cohen, Thomas, &amp; Dawson (2008)</td>
<td>Family group decision-making</td>
<td>110 children</td>
<td>Randomised controlled trial</td>
</tr>
<tr>
<td>Shlonsky &amp; Saini (2011)</td>
<td>Family group decision-making</td>
<td>6 studies</td>
<td>Systematic review</td>
</tr>
<tr>
<td>Sundell &amp; Vinnerljung (2004)</td>
<td>Family group decision-making</td>
<td>239 children</td>
<td>Randomised controlled trial with 3-year follow-up</td>
</tr>
<tr>
<td>Vis, Strandbu, Holtan, &amp; Thomas (2011)</td>
<td>Shared decision-making and Family group decision-making (in particular child participation)</td>
<td>21 studies</td>
<td>Systematic review</td>
</tr>
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</table>

3.2 Structured decision-making
Léveille and Chamberland (2010) performed a systematic review on 36 studies on the implementation and effects of the British Framework for the Assessment of Children in Need and their Families (FACNF). This assessment framework aims to help practitioners understand the complex situations of children and their families who need additional services. It combines the developmental needs of children, the parental skills required to meet the child’s needs, and the
family and environmental conditions that influence both developmental needs and parental skills. To assess these needs, skills and conditions the framework contains some standardised checklists. The framework is implemented in 15 countries, six of which studied the implementation and effects. The studies included in this review showed that practitioners using this framework were more child-centred and took a holistic approach (i.e., took the child’s family and environment into account). Their assessment process was more structured and practitioners made better analyses of complex situations. Léveille and Chamberland (2010) found no research that addressed the impact of the framework on child development and child welfare.

Barlow, Fisher, and Jones (2012) performed a systematic review of studies on risk assessment instruments and structured decision-making models. The researchers identified a wide range of instruments designed to support workers in their risk assessment and case decision-making. They concluded that evidence for these instruments is currently limited. They found that recent studies on the implementation of the Structured Decision-Making model have indicated unintended harmful consequences when the use is not accompanied by essential infrastructure and organisational change, for example high quality and comprehensive training, supervisory and management support, and the involvement of supervisors and line managers in the implementation process. The researchers found no studies on the comprehensive “Safeguarding Assessment and Analysis Framework” developed in the UK.

In two studies in the Netherlands, the effects of structured decision-making were studied. De Kwaadsteniet, Bartelink, Witteman, Ten Berge, and Van Yperen (2013) investigated whether a structured decision-making method (called ORBA) improved systematic and transparent decision-making in child maltreatment reporting agencies in the Netherlands. ORBA emphasises the importance of making explicit judgments and decisions through a structured decision-making process in which the extent of potential danger for the child and the possibilities of guaranteeing child safety and protection in the family are considered. ORBA offers guidelines, criteria, and checklists to assist in the process of collecting information about cases, judging whether there is a case of substantiated child maltreatment, and deciding whether care or protection is needed. De Kwaadsteniet et al. (2013) analysed and compared the contents of 60 case records from 2005 in which ORBA was not applied, to 100 case records from 2010 in which ORBA was applied. The 2010 records more often contained relevant information and process steps that ORBA prescribed than the records from 2005. However, rationales for judgments and decisions were often still absent in 2010. The researchers concluded that the decision-making process had clearly become more systematic and more transparent, but more improvements were needed, specifically in explicitly motivating decisions.

Bartelink, Van Yperen, Ten Berge, De Kwaadsteniet, and Witteman (2014) studied the inter-rater agreement of ORBA using vignettes. They compared the child maltreatment decisions of 40 trained practitioners with those of 40 untrained practitioners. With the exception of the judgment on child maltreatment substantiation, both ORBA trained and untrained practitioners showed little agreement on judgments and decisions. Agreement among trained and untrained practitioners only differed for some decisions but not all. The most obvious difference was found for the decision on whether child maltreatment was substantiated. Trained practitioners agreed on this decision more often than untrained practitioners. However, for some decisions, untrained practitioners agreed more than trained practitioners, e.g., the decision on whether a case should be investigated by the agency. The authors concluded that the results indicated no convincing
evidence that structured decision-making led to more agreement on decisions concerning child abuse and neglect.

Overall, the impact of structured decision-making seemed limited. Although some research reported effects on the more comprehensive analysis of cases, inter-rater reliability did not seem to improve.

3.3 Risk assessment instruments

Barlow et al. (2012) found several risk assessment instruments, but concluded that the evidence for these instruments is currently limited. The evidence mainly supports the use of the “California Family Risk Assessment” tool, particularly at referral or as part of the initial assessment. There is some evidence to support the use of the other actuarial tools developed by the Children’s Research Centre as a part of the Structured Decision-Making model.

In a series of three studies, Baumann, Law, Sheets, Reid, and Graham (2005) evaluated the added value of an actuarial risk assessment compared to judgments by workers who do not use the instrument. Study 1 and Study 2 were experiments with random assignments exploring the effects of several actuarial instruments on worker risk assessment. The researchers chose instruments that had shown to be more or less successful in previous studies. The researchers were not clear about the meaning of (un)successfulness, but it seems plausible that they referred to the validity of the instruments (face, content, and predictive validity). The results of the first study indicated that the actuarial instrument influenced worker assessment, but the instrument was not superior to judgments made by workers not using the instrument. The second study compared three relatively unsuccessful instruments to a successful actuarial instrument, but even this successful instrument was not superior to worker judgment. In the third study, some workers were provided with feedback from an actuarial instrument in the form of an “alert” requiring action on an actual case, others were not exposed to this feedback. The “alert” influenced case judgments, but the effect of the “alert” was only small. Overall, the researchers concluded that the actuarial instruments were not superior to clinical judgment.

Bolton and Lennings (2010) studied the value of three structured risk assessment approaches: an actuarial instrument, a contextual/dynamic instrument, and a combination of the two measures. The actuarial instrument was a strictly research based instrument containing items that statistically predicted child abuse and neglect. Cut off scores were based on research. The contextual/dynamic instrument contained items that were not strictly research based but were believed to be important dynamic factors that influence child maltreatment. The final risk level was a conclusion made by professional judgment. The combined instrument was a risk matrix combining conclusions on both types of instruments to reach the final risk level. Five clinical psychologists each judged thirty vignettes. The study showed that the actuarial instrument produced the most consistent decisions. However, the study also showed that the psychologists favoured the combined instrument the most, followed by the contextual/dynamic instrument, and finally the actuarial instrument. The researchers concluded that practitioners seemed to lack the knowledge to trust actuarial instruments, although these had the most potency to positively influence the quality of decision-making.

Herman (2005) investigated an actuarial approach for child sexual abuse. He re-analysed data provided by Keary and Fitzpatrick (1994) that were based on interviews with only the child. Child disclosure on sexual abuse before or during a formal investigation was used to predict
substantiation decisions. It was predicted that three simple rules for child disclosure would lead to substantiation: 1) disclosure before the interview led to substantiation; 2) disclosure during the interview led to substantiation, and 3) disclosure before and during the interview led to substantiation. Using these rules Herman’s (2005) analysis resulted in low error rates, low false positives, and negatives of the substantiation decision. He concluded these rules should be modified. It seemed that in a small number of cases there was convincing external evidence that abuse has occurred, although children made discrepant disclosures or no disclosure at all. And in a small minority of cases in which children have made a statement of abuse, there may be convincing external evidence that the allegations are false or that the perpetrator has not been correctly identified by the child. Another conclusion made by Herman (2005) was that the model should be further tested in real-life practice and other psychosocial factors known to influence substantiation decisions should be included in the actuarial model. The research methodology of Herman (2005) was unclear and he did not use an objective outcome measure to substantiate sexual abuse. It’s only logical that cases were substantiated when the child told about sexual abuse.

Overall, actuarial risk assessment instruments seem to perform slightly better than consensus-based risk assessment instruments, although some researchers found that the predictive validity of these instruments did not outperform clinical judgment.

3.4 Shared decision-making
Vis, Strandbu, Holtan, and Thomas (2011) performed a systematic review of studies on child participation in case planning and decision-making in child protection. Their review showed positive effects of child participation on immediate safety and well-being, and successfulness of out-of-home placement. They did not find studies on the long-term effects of child participation in decision-making processes on safety and well-being outcomes. More specifically, Vis et al. (2011) conclude that review meetings (i.e., planning and evaluation meetings guided by professionals) were more successful than family group conferences. They found that safety and well-being improved more in children participating in review meetings than in children who did not participate in a review meeting.

McLendon, McLendon, Dickerson, Lyons, and Tapp (2012) studied the effects of parent participation in planning and decision-making in child protection and child welfare. They found positive results on child maltreatment recurrence and out-of-home placement but also concluded that specific methods or interventions for parent participation were lacking. McLendon et al. (2012) did not describe their methodology. Therefore their conclusions should be considered with caution.

Lee and Ayón (2004) studied the effects of the client-worker relationship on child abuse outcomes in 100 families. Better client-worker relationships were associated with better outcomes in discipline and emotional care of children. The ability to communicate openly by the practitioner and two-way communication were found to be positive predictors of the client-worker relationship.

Motivational interviewing is a way of interviewing that supports practitioners in helping clients make their own decisions about change and treatment. A specific motivational interviewing intervention for families is the Family Check Up. The Family Check-Up (FCU) is a brief, family-centred intervention focused on family-management practices for high-risk youth and families. The intervention targets disrupted, unskilled family management practices. Though child maltreatment is not the specific target of this intervention, FCU focuses on mechanisms of compromised parenting that is very similar to those in maltreating families. Therefore the
following randomised controlled trials were judged to be relevant. Dishion, Nelson, and Kavanagh (2003) studied the effects in families with young adolescents at risk of substance abuse due to a lack of parent monitoring. They compared parents receiving the Family Check Up to parents receiving an assessment as usual. Both groups received the same parenting intervention. Participation in the Family Check Up increased parent monitoring and decreased substance use by adolescents; effects of the intervention group were better than in the control group. Connell, Dishion, Yasui, and Kavanagh (2007) repeated the Dishion et al. (2003) study. They found similar effects on substance use. The intervention also led to a reduction of arrest rates and the likelihood of being diagnosed with a substance abuse disorder. They found that families with the highest risks due to several risk factors were most eager to participate in the Family Check Up and parenting intervention; these families also reached positive outcomes. Dishion et al. (2008) studied the effects of the Family Check Up in families with toddlers experiencing behaviour problems. Their study showed positive effects on positive and proactive parenting of mothers and on destructive behaviour by toddlers. Families experiencing high risks due to depressive symptoms of mothers and uninhibited behaviour of the toddler also reached positive effects.

Antle, Christensen, Van Zyl, and Barbee (2012) investigated the effects of the Solution–Based Casework practice model on safety, permanency and well-being. The Solution–Based Casework practice model is an assessment and case planning method and combines family development theory, solution–focused skills and relapse prevention for the casework process in child protection. This practice model encourages family involvement in the assessment and case planning process. The practitioner makes behaviourally specific plans together with the whole family to establish child safety and well-being. Antle et al. (2012) established the level of adherence to the model and analysed the impact of adherence on safety, permanency and well–being outcomes in 4,559 public child welfare cases. The use of the Solution–Based Casework model was associated with better outcomes. Solution–Based Casework intake and investigation skills of the practitioner improved child safety in particular; case planning skills improved permanency outcomes.

Overall, studies on shared decision–making are scarce. Nevertheless some promising results were found. Additional studies on motivational interviewing and solution–focused casework showed some positive results on child safety and parenting skills.

### 3.5 Family group decision-making

Family group decision-making is widely established (Asscher, Dijkstra, Stams, Deković, & Creemers, 2014; Sliwka, 2011). However, only a few studies on its effectiveness were found.

Berzin, Cohen, Thomas, and Dawson (2008) evaluated the effects of family group decision–making on child welfare outcomes using random assignment to control and experimental groups. The findings suggest that children receiving family group decision–making were not worse or better off than children receiving traditional child welfare services; results for safety, permanency and stability were the same for the control and experimental group.

Sundell and Vinnerljung (2004) also evaluated the effects of family group decision–making in a randomised controlled trial. They compared the 3–year outcomes for 97 children receiving family group decision–making to 142 children receiving traditional child protection investigations. They concluded that all families receiving family group decision–making were able to make a plan to solve the problems identified by the child protection services. Furthermore, the effects of family group decision–making were small. Children receiving family group decision–making were
more often re-referred to child protection services due to child maltreatment than children in the control group and stayed longer in out-of-home care. However, children receiving family group decision-making received over time less intensive support by child protection services and stayed more often with relatives. Sundell and Vinnerljung (2004) conclude that the results of this study do not confirm the expectations on long-term positive effects of family group decision-making.

Shlonsky and Saini (2011) performed a systematic review on six studies (two randomised controlled trials and four non-randomised trials). They found that families receiving family group decision-making expressed greater satisfaction with the services they received than families receiving care as usual. However, children receiving family group decision-making tended to have more maltreatment recurrences and more placements in out-of-home care than children who did not receive family group decision-making. Families receiving family group decision-making tended to receive more services than families receiving usual care. They concluded that family group decision-making appears to have potential as a tool for family engagement, but that it does not reduce child maltreatment recurrence or out-of-home placement.

In their systematic review, Vis et al. (2011) report on effects of family group conferences on child participation. They found no convincing evidence that children participating in a family group conference had better outcomes than children who did not participate.

Family group decision-making might be an effective tool for family engagement; however, the effects on child maltreatment outcomes is addressed in only a few studies. Some of these showed no effects or negative effects of family group decision-making.

4. Discussion

The main question of this review concerned which decision-making methods improve individual decision-making on child maltreatment cases in child welfare and child protection. The literature revealed four methods: structured decision-making, risk assessment instruments, shared decision-making, and family group decision-making. Although many researchers have studied the decision-making process and found severe shortcomings, the evidence for methods that may improve decisions on child maltreatment cases is scarce. The research found primarily focuses on the decision-making process (i.e., client satisfaction, treatment adherence, transparency). The outcomes (i.e., child safety, parenting skills, recurrence of child maltreatment, out-of-home placement) were investigated in only a few studies. The available studies show some promising, but also some disappointing results.

First, structured decision-making, in particular the Framework for the Assessment of Children in Need and their Families, seems to improve the transparency and systematics of the assessment. The analysis is more comprehensive and child-centred. However, structured decision-making does not improve the inter-rater agreement. Although they do not meet our inclusion criteria, a few other studies confirm these conclusions. Kang and Poertner (2006) found a low inter-rater reliability (kappa = .29) for the decision on the level of state intervention using the Illinois Structured Decision Support Protocol. Findings by Wells and Correia (2012) suggest that safety and risk assessments were related to re-entry decisions and may be valuable for decision-making around out-of-home placement.

The findings on structured decision-making are based on only several studies, so conclusions should be drawn with caution. Research might be scarce, because the decision-making process as it is executed in child welfare and child protection is commonly not described well enough to examine
its effects in an empirical study (Hunsley & Mash, 2007). In particular difficult to describe in decision-making methods and underexposed in empirical studies is the way practitioners should weigh information from multiple sources (interviewing, questionnaires and/or observation of parents, the child, social network and/or other practitioners) (Klein, Dougherty & Olino, 2005; Pelham, Fabiano & Massetti, 2005). This is mostly problematic because practitioners in child welfare and child protection have to make decisions based on multiple sources continuously. The positive initial findings on structured decision-making, however, justify further implementation and research.

Second, the results of the studies on the use of risk assessment instruments varied: in some studies actuarial risk assessment seemed to reach better assessments than clinical judgment, but in other studies clinical judgment appeared to be as good as an actuarial instrument. Risk assessment instruments have been shown to be reliable and valid in some studies, but almost no researcher has studied the added value of risk assessment instruments as compared to clinical judgment. Research from other fields shows strong evidence for the use of questionnaires and computer assisted assessment (Ægisdottir et al., 2006; Grove et al., 2000). However, actuarial risk assessment in particular is also criticised. Everson, Sandoval, Berson, Crowson, and Robinson (2012) criticised the research of Herman (2005) for being overly negative on decision accuracy based on studies that did not reflect the decision-making practice, and for overly simplifying the substantiation decision to a single child interview that does not resemble the current practice in which a comprehensive evaluation is executed. In child welfare and child protection the added value of risk assessment instruments should be studied in more detail.

Third, initial findings on methods of client participation (both parents and children) and shared decision-making in child welfare and child protection are promising, although the number of studies is low. The results show that client participation improves client satisfaction, but research on the outcomes (i.e. child safety and well-being) is scarce. Decision-makers on child maltreatment can benefit from evidence in medical decision-making and psychological treatment. The evidence on shared decision-making in these fields is quite robust. Studies on both assessment and decision-making show positive effects of shared decision-making and participation on treatment results (e.g., client satisfaction, treatment adherence and outcomes; Faber, Harmsen, Van der Burg, & Van der Weijden, 2013; Joosten et al., 2008; Patel, Bakken, & Ruland, 2008; Poston & Hanson, 2010; Swift & Callahan, 2009; Westermann, Verheij, Winkens, Verhulst, & Van Oort, 2013). Motivational interviewing and solution-focused interviewing techniques could be useful for client participation (both parents and children) in child welfare and child protection decision-making. These methods both emphasize client responsibility and encourage clients to find their own solutions to their problems. However, research on these methods for maltreating families is scarce, as this review shows.

Fourth, family group decision-making appear to be a potential tool for family engagement, but it shows no effects or negative effects on child maltreatment outcomes. The evidence for the effectiveness of family group decision-making in child welfare and child protection is scarce. Although family engagement is important in child welfare and child protection, it seems that practitioners should be aware of the limitations of family group decision-making because it may have a negative effect on child safety. Practitioners should monitor child safety accurately. Methods that combine shared decision-making with close monitoring of child safety (for example “Signs of Safety”, Turnell & Edwards, 1999) may be more appropriate for child maltreatment cases than family group decision-making alone.
A striking finding is that in all studies only parts of the assessment and decision-making process were studied. The studies on shared decision-making emphasize the dialogue with parents and children, but do not mention the professional knowledge a practitioner needs to make these decisions. Conversely, the Framework for the Assessment of Children in Need and their Families and other structured decision-making models emphasize professional knowledge, but not the interviewing techniques a practitioner needs to collect information with families or increase their readiness for change. There are no assessment and decision-making methods that combine shared decision-making, structured decision-making, the use of valid questionnaires or risk assessment instruments and other tools for deciding on evidence-based interventions. In our opinion, this combination would provide the best opportunities for future studies. This might provide practitioners with both the professional knowledge and skills they need to investigate and decide on child maltreatment cases.

4.1 Limitations of the study
Studies on decision-making in child maltreatment are scarce. Therefore, our results are based on a limited amount of studies. The quality of the included studies was not formally assessed (e.g., appropriateness of study design, selection and representativeness of the study groups, risk of bias, etc.). Some articles may certainly be compromised in their design. For example, one of the reviews (McLendon et al., 2012) did not report details on the search and study inclusion. Several included studies did not randomly assign to the experimental and control group. We chose to include all studies to find promising ways to improve decision-making on child maltreatment, because only a limited number of studies was available.

In addition, researchers published results mainly on process indicators and hardly on child maltreatment outcomes. In the end, effective decision-making should improve outcomes for children (i.e. effective protection and interventions, more child safety, less child maltreatment). Our knowledge which methods improve child safety and well-being is limited. Studies need to focus more on child safety and well-being.

Our review shows that the amount of high quality research on decision-making on child maltreatment cases is very limited. Moreover, these studies address only partially the question which methods may improve decision-making on child maltreatment cases. However, research from other fields lends support and adds to the findings in child welfare and child protection.

We conclude that considerable work has to be done to develop an evidence-based decision-making process in child welfare and child protection. Assessment and decision-making processes may have considerable impact on treatment outcomes. It is therefore absolutely necessary to further develop effective decision-making methods and study their effects.

4.2 Recommendations
Despite the limitations, we conclude that potential improvements of assessment and decision-making on child maltreatment cases may be found in the implementation of shared decision-making and structured decision-making, as well as the use of valid questionnaires and risk assessment instruments. Use of these methods may improve the decision-making process; however, the outcomes on child safety and well-being should be studied further. The decision-making process should lead to effective protection and intervention for children and families. An effective decision-making process is an essential condition for the effectiveness of treatment, and
the effectiveness of the treatment may be an indicator for the effectiveness of the decision-making process. Therefore, outcomes on child safety should be studied to establish the effectiveness of the decision-making.

Our main recommendation is that practitioners should use a combination of methods when deciding on child maltreatment cases. Part of their method should be structured and shared decision-making methods as well as risk assessment instruments. These methods together should enhance systematic decision-making resulting in effective protection and intervention and increase child safety and decrease child maltreatment. How these methods interact with each other and together improve decision-making should be studied.

Shared decision-making seems to be an effective way for client participation in decision-making. This method seems particularly important for long-term effects on the behaviour of clients (Joosten et al., 2008). Families experiencing child maltreatment are comparable to clients that need long-term behaviour changes; long-term behaviour changes require intrinsic motivation. Motivational interviewing and solution focused interviewing techniques may be useful as part of a shared decision-making process and should be explored further as a way to achieve more client participation in decision-making. Motivational interviewing and solution focused interviewing techniques seem to be effective for families with parenting problems (Antle et al., 2012; Connell et al., 2007; Corcoran & Pillai, 2009; Dishion et al., 2003, 2008; Gingerich & Eisengart, 2000; Kim, 2008; Stams, Deković, Buist, & de Vries, 2006). Possible positive results may be reached with motivational interviewing in maltreating families. “Signs of Safety” (Turnell & Edwards, 1999) is a solution focused approach for maltreating families. Although initial studies report positive outcomes on client satisfaction, child maltreatment recurrence and out-of-home placement (Turnell, 2008; Turnell & Essex, 2006), no peer reviewed studies have yet been published. The initial results seem to be promising and justify further exploration.

Perhaps decision-making in child maltreatment can benefit from the support of a computerised decision support system. In child welfare and child protection, decision support systems are not used, but research from other fields shows that computerised decision support systems could improve structured decision-making (Garg et al., 2005; Kawamoto, Houlihan, Balas, & Lobach, 2005; Mollon et al., 2009). These systems provide practitioners with client-specific advice using algorithms to compare client characteristics against a knowledge base. In medical decision-making, decision support systems seem to be effective tools. There are no studies on decision support systems in child welfare and child protection. However, in child mental health a promising development may have occurred. A group of researchers in the United States developed a modular approach for treating children with mental health problems and database on child mental health interventions that supports practitioners in their decision-making in daily practice; the database is called the Practicewise Evidence-Based Services (PWEBS) database (Barth et al., 2012). Practitioners use this database together with practical user guides on treatment techniques and a clinical dashboard for monitoring treatment effects. They decide systematically which treatment techniques they will use during treatment, depending on the dominant problems children face. A randomized controlled trial showed that their modular approach outperformed care as usual and standard evidence-based treatments. Youth receiving the modular approach had less behavior problems and fewer diagnoses after treatment than youth receiving care as usual or the standard evidence-based treatments (Weisz et al., 2012). This example of a decision support system in child mental health treatment could inspire decision-making on child maltreatment cases and should be studied further.
Furthermore, some recommendations for research can be made. Research on assessment and decision-making processes is scarce, particularly in child welfare and child protection. Research should address what the effects of a combined shared and structured decision-making process are on child safety (e.g., recurrence of child maltreatment, out-of-home placement). A result of evidence-based decision-making should be that parents and children have better outcomes. One hypothesis is that structured decision-making improves the transparency and accountability of the decisions. Transparency and accountability are important because they enhance communication between practitioners on cases and communication with parents and children. In the end, transparency may effect treatment progress and long-term results because it may positively influence the worker-client alliance. Regarding shared decision-making we assume that this method may increase client satisfaction and treatment adherence, and, as a result, may increase treatment outcomes and decrease drop-out. Stein et al. (2013) raised the question whether a computerised decision tool strengthens the dialogue between practitioners on the one hand and parents and children on the other hand. Other researchers hypothesize that shared decision-making improves the therapeutic alliance and to what extent the alliance influences the treatment outcomes (Lee & Ayón, 2004; Miller & Rollnick, 2002; Turnell & Edwards, 1999; Velligan et al., 2010). They argue that practitioners reach positive effects with shared decision-making, motivational interviewing or solution focused work because these techniques strengthen the therapeutic alliance with and commitment of parents and children, their hope for and dreams about change, their self-efficacy, and their motivation and abilities. These are important issues in child welfare and child protection. Therefore, these questions and the relations between structured decision-making, shared decision-making, the therapeutic alliance and treatment outcomes should be studied further.
Chapter 2b

Reply to the Letter to the Editor of Van der Put, Assink, & Stams about “Deciding on child maltreatment: A literature review on methods that improve decision-making”

We thank Van der Put, Assink and Stams for their interest in our literature review on methods that improve decision-making in child maltreatment cases. They stir up a discussion on actuarial versus consensus-based instruments that has been going on for years and has previously been called “the war on risk assessment” (Johnson, 2006; White & Walsh, 2006). It is important to carefully assess the evidence on the value of risk assessment instruments, and of instruments versus clinical judgment. The purpose is to assist workers in using the best methods available for making judgments and decisions on vulnerable children and families.

Van der Put et al. express concerns about the comprehensiveness of our literature review. Specifically, they miss the articles of Baird and Wagner (2000) and D’Andrade, Austin, and Benton (2005). We did not miss these articles. However, we did not describe the studies they mention separately, because Barlow, Fisher, and Jones (2012) included these in their review. Inclusion of all three articles would have led to an extensive overlap and might make the reader think that there is a lot of evidence on risk assessment instruments, while actually the evidence is scarce and the articles presented information on the same studies. Barlow et al. (2012) included 17 studies that D’Andrade et al. (2005) also included. Five studies in the review of D’Andrade et al. (2005) were not included by Barlow et al. (2012). These studies investigated the reliability and validity of consensus-based risk assessment instruments. They add to the evidence that consensus-based instruments have low reliability and validity. Although this finding would not have changed our conclusions, we acknowledge that – for the sake of clarity – it would have been best if we had mentioned this non-overlapping part of D’Andrade et al.’s review.

The second concern of Van der Put et al. is the exclusion of studies reporting on individual instruments. We agree with Van der Put et al. that it is quite usual to study the reliability and validity of individual risk assessment instruments without comparison to a control group (i.e. another instrument or no instrument). It might seem too restrictive to exclude studies on the performance of individual instruments when this is the usual research approach. However, based on studies on individual instruments, it is not possible to conclude whether these instruments will improve decisions made in child maltreatment cases, which was the purpose of our review. Therefore we excluded studies on individual instruments that made no comparison with other instruments or conditions, as is usual in meta-analyses and systematic reviews on the effectiveness of interventions.

Further, Van der Put et al. state that the study of Barlow et al. (2012) should not be included because this study reported on individual instruments. However, we excluded articles reporting on a single instrument without a control condition. For the purpose of our study we were interested in including reviews that compared and discussed different (types) of instruments, or the use of an instrument versus no instrument. The study of Barlow et al. (2012) offered such a comparison. A drawback of reviews like that of Barlow et al.’s is that it cannot be assured that the comparison made between instruments pertains to comparable cases, because they do not describe or analyze statistically the research results in relation to the purpose and target group of the included instruments. Barlow et al. (2012) describe and compare the instruments systematically; they did not make clear whether the cases in the included studies are comparable. Therefore, in the future these reviews should also comprise a careful comparison of the cases that have been subject in each of the included studies.

Finally, Van der Put et al. find it remarkable that study findings obtained in other disciplines were not included (for example Ægisdottir et al., 2006; Dawes et al., 1989; Grove & Meehl, 1996;
Evidence from other disciplines makes clear that actuarial prediction methods are about 10 percent more accurate than clinical judgment (Ægisdottir et al., 2006; Grove et al., 2000). Thus, the difference between actuarial prediction methods and clinical judgment is not very large. Nevertheless, one could argue that this 10 percent is important, leading to improvement in every one out of ten cases. However, since these studies do not pertain to the field of child protection and child welfare, it cannot be assumed that the evidence similarly applies to risk assessment in child maltreatment cases. Important in this respect is that Ægisdottir et al. (2006) showed that actuarial prediction methods did not improve all prediction tasks. Actuarial methods outperformed clinical judgments on some predictions, for example treatment length or an offense or violence. There was no difference between actuarial methods and clinical judgments in more difficult prediction tasks, for example personality type, suicide attempts, brain impairment, and IQ. It is reasonable to assume that predicting the occurrence or reoccurrence of child maltreatment is one of these difficult prediction tasks, because it is influenced by a complex interplay of risk and protective factors (Munro, 2014), and involves normative and culturally bound judgements (Baumann, Dalgleish, Fluke, & Kern, 2011). Therefore, if studies on actuarial prediction methods are to be included, these should be studies about risk assessment in the field of child protection and welfare and nothing else. There are some studies in this field that included actuarial risk assessment instruments. We concluded in our review that “in some studies actuarial risk assessment seemed to reach better assessments than clinical judgement, but in other studies clinical judgement appeared to be as good as an actuarial instrument” (p. 149). However, we also think that there is not enough research, in particular research that compares instruments to a control group, to state that actuarial instruments are preferable. Moreover, we are concerned that the most promising instruments (see Barlow et al., 2012; D’Andrade et al., 2005), for example the Children’s Research Center (CRC) actuarial instruments, have serious flaws in predicting the occurrence or reoccurrence of child maltreatment.

Conclusion
The letter to the editor has provided another opportunity to highlight key issues moving forward in assessment and decision-making research. Firstly, the evidence base is in need of more rigorous work that compares assessment approaches to different key prediction issues. The exclusion of studies in our review was aimed at preventing an overlap of sources that otherwise may have resulted in an erroneous impression on the amount of studies that are available. Articles on individual instruments have not been included; for the purpose of our study we were interested in including reviews that compared and discussed different (types) of instruments, or the use of an instrument versus no instrument. We recognize that high quality research with experimental and control groups in child welfare and child protection is possible and necessary in addition to other types of research (see Tanaka, Jamieson, Wathen, & MacMillan, 2010). Contrary to what Van der Put et al. state, we do not suggest that clinical judgment may produce better assessments compared to actuarial methods. In our opinion, the evidence on risk assessment of child maltreatment is inconclusive and both actuarial and consensus-based risk assessment instruments have serious flaws in predicting child maltreatment occurrence or reoccurrence. Therefore, we caution about policy decision-making in the context of this relative lack of adequate research. As we concluded in our review, professionals should not only be aware of the limitations of their own judgments, but
also of the limitations of instruments. The field of child welfare and child protection needs more reliable and valid instruments, but also improvement of other aspects of the decision-making process may move forward the services provided to vulnerable families (e.g. child and parent participation in decision-making).