Safety and risk assessment in child welfare
Moving forward
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General Discussion
Chapter 8

8.1 DISSERTATION OBJECTIVE

Assessing immediate child safety and the risk for future child safety problems are essential in the work of child welfare professionals. After all, interventions can only be effective if they are based on the results of accurate safety and risk assessments. The availability of reliable and valid instruments is a prerequisite for properly conducting these assessments. Yet, evidence-based safety and risk assessment instruments are scarcely available in child welfare. Therefore, the primary aim of this dissertation was to improve safety and risk assessment procedures in child welfare. The following studies were performed to achieve this aim: A qualitative review on the immediate child safety aspects that are assessed in international safety assessments instruments (Chapter 2), a qualitative study on the content validity and usability of the ARIJ safety assessment instrument (Chapter 3), a mixed-methods study on the concurrent validity of the ARIJ safety assessment instrument (Chapter 4), a study on the reliability of the ARIJ safety and risk assessment instrument (Chapter 5), a study on the predictive validity of the ARIJ risk assessment instrument (Chapter 6), and a study on the interrelatedness of risk factors for child maltreatment in which the innovative network analysis technique was applied to the child maltreatment field for the first time (Chapter 7).

8.2 MAIN FINDINGS

8.2.1 The Comparison of Safety Assessment Instruments

The internationally used safety assessment instruments showed a wide variety in the immediate safety threats that are measured, as a total of 53 different immediate safety threats were identified. Moreover, half of these threats were only measured with a single instrument. Despite this wide variety, there were also threats that showed resemblance between the instruments, as these threats were measured in at least four of the seven instruments. In short, the following threats were identified with most instruments: (1) sexual abuse of a child, (2) a caregiver refuses access to the child, (3) a child’s immediate needs are unmet, (4) a caregiver’s substance abuse impairs his/her capacity to supervise, protect, or care for the child, (5) a child’s physical living conditions are hazardous, (6) a child is seriously injured, which was not caused by an accident, (7) a caregiver threatens to inflict harm upon a child or to retaliate against a child, (8) domestic violence, and (9) a caregiver describes the child or acts towards the child in a predominantly negative manner. Even though most instruments are only practice-based, the fact that these immediate safety threats are measured in most of the instruments could imply that they are valid and should therefore be part of the conceptualization of immediate child safety.
8.2.2 The Content Validity and Usability of the Safety Assessment Instrument

Most aspects measured in the ARIJ safety assessment instrument were considered to be important for determining a child’s immediate safety, and were therefore content-valid. However, both the users of the instrument and the experts on immediate child safety described additional immediate safety aspects that should be assessed with the instrument: emotional abuse, harm inflicted by others (for which caregivers are unable or unwilling to protect the child), a caregiver’s psychiatric disorder that imposes an immediate threat to the child, and a child’s psychiatric problems that impose an immediate threat to him/herself. Including these aspects in the safety assessment instrument may improve its validity. When these results are compared to a previous study in which safety assessment instruments were compared (Scannapieco & Depanfilis, 1994), it is notable that the results of the current study underline that a child may need to be safeguarded against threats caused by others than its caregivers. In contrast, Scannapieco and Depanfilis (1994) did not identify this immediate safety threat. This might be because the child protection system generally focuses on the prevention of child maltreatment, and child maltreatment is often described in a context of responsibility for or power that the caregiver has over the child (World Health Organization, 2017). However, if caregivers are not able to protect a child from threats caused by others, this should also be addressed in a safety assessment according to the findings of this study. Another main finding of the current study was that the users of the ARIJ safety assessment instrument considered it to be useful for determining a child’s immediate safety. However, they also made recommendations for improving the wording of items, the descriptions of items, and the formulations of the outcomes of the instrument.

8.2.3 The Concurrent Validity of the Safety Assessment Instrument

The safety decisions reached by practitioners using the ARIJ safety assessment instrument were found to moderately concur with the safety decisions reached by the expert panels. In cases with discrepancies, the ARIJ safety assessments more often concluded that the child was in immediate danger, whereas the expert panels did not consider the child to be in immediate danger. However, the experts often identified more different types of immediate safety threats when they deemed the child to be in immediate danger. Immediate safety threats caused by the child’s behavior and caused by others than the caregivers were mentioned additionally to the threats measured in the ARIJ safety assessment instrument. Adding these threats to the instrument may improve its validity. In general, these threats were the same as the threats identified by the practitioners and experts in the previous study (Chapter 3).
Chapter 8

Notably, the experts in the panels sometimes used different definitions of immediate child safety. For example, the time since the last incident and the chronicity of the child safety problems played a central role in the decisions of some experts. For this reason, the experts less often considered the children who lived in chronically unsafe families as in immediate danger. Furthermore, the experts weighted some aspects in their assessments that are often not described in safety assessment instruments, such as "how well a child is functioning". In cases in which the child functioned well, the experts sometimes considered the child to be safe despite the serious problems in a family. This is remarkable, as incident reports have shown that immediate safety threats can be underestimated if a child does not have any behavioral problems or seems to function well.

8.2.4 The Reliability of the Safety and Risk Assessment Instruments

The ARIJ safety assessment instrument’s items and outcome showed moderate-to-high interrater reliability, and substantial to almost perfect intrarater reliability. Additionally, the risk assessment items generally showed moderate interrater and substantial-to-high intrarater reliability. The risk assessment outcome had near-perfect interrater reliability, and a substantial to almost perfect intrarater reliability. Moreover, the reliability of both instruments was consistent for raters with different levels of (work) experience. Overall, the results of this study were promising for the use of the instruments in practice, but also provided valuable information for the new versions of the safety and risk assessment instrument.

8.2.5 The Predictive Validity of the Risk Assessment Instrument

The predictive accuracy of the risk assessment instrument for the populations of multiple different organizations was similar to the accuracy assessed at the time of the instruments development (AUC = .63; Van der Put, Assink, & Stams, 2016). All risk factors measured in the instrument, including the experimental factors (i.e., potential risk factors that were extracted from the literature and of which the predictive value had not yet been studied in the Dutch population), showed to be significant predictors of child maltreatment, and were therefore used to develop a new actuarial risk classification. This newly developed risk classification was also simplified as it was only based on cumulative risk. This increased the practical application of the instrument for different types of child welfare agencies. Similar to the original risk classifications, the new risk classification showed to have a moderate predictive accuracy. However, the new risk classification is more widely applicable, and based on additional valid risk factors. Therefore, the development of a new version of the ARIJ risk assessment instrument was justified.
8.2.6 The Interrelatedness of Risk Factors for Child Maltreatment

The risk factors for child maltreatment showed to be highly interrelated. Moreover, the risk factors were generally stronger related in the high-risk sample than in the lower risk sample. These findings are in line with theories on child maltreatment that assume that the interactions between risk factors determine whether or not child maltreatment occurs (e.g., Belsky, 1993). Additionally, these findings are in line with research that found the cumulative risk to be the strongest predictor of child maltreatment (Brown, Cohen, Johnson, & Salzinger, 1998; Lamela & Figueiredo, 2018; Li, Chu, Ng, & Leong, 2014; MacKenzie, Kotch, Lee, Augsberger & Hutto, 2011; Patwardhan, Hurley, Thompson, Mason, & Ringle, 2017; Thornberry et al., 2014; Yang & Maguire-Jack, 2018), and research that found evidence for a nonlinear quadratic model of cumulative risk (Lamela, & Figueiredo, 2018; Patwardhan, Hurley, Thompson, Mason, & Ringle, 2017). Three factors were found to have a central role in the interactions between the risk factors: “Caregiver was maltreated as a child”, “History of domestic violence”, and “Caregiver is emotionally absent”. The fact that maltreatment during a caregiver’s childhood plays a central role is in line with our knowledge on intergenerational transmission of child maltreatment (Assink et al., 2018; Pears & Capaldi, 2001; Stith, 2000).

8.2.7 The Improvement of Safety and Risk Assessment Procedures in Child Welfare

The findings of this dissertation are useful in moving forward the safety and risk assessment procedures in child welfare. Both the ARIJ safety assessment instrument and the ARIJ risk assessment instrument could be improved based on the results of the studies that make up this dissertation. In light of the results of these studies, it is recommended for clinical practice to use the improved versions of the ARIJ child safety and risk assessment instruments. The safety assessment instrument now measures new valid immediate safety threats, and the risk assessment instrument measures new valid risk factors. Consequently, assessments can be more properly and thoroughly conducted with these improved instruments. Moreover, the improved instruments are now more applicable to populations that are being served by the different types of child welfare agencies that form the system of child welfare as we know it in the Netherlands. It can be expected that using the new ARIJ safety assessment and risk assessment instruments will improve the quality of safety and risk assessment in child welfare. As a result, children and their families are more often directed to the best fitting interventions, so that care needs are met and the risk for the (recurrence) of child abuse decreases.
Chapter 8

8.3 STRENGTH AND LIMITATIONS

An important strength of this dissertation is that it focused on the quality of the ARIJ safety and risk assessment instrument at the different types of child welfare organizations in which the instrument has been implemented. The ARIJ instruments were initially developed for families served by child protection agencies. Due to a lack of instruments that are specifically tailored to other child welfare agencies (such as child and family support services, and community outreach services), many types of child welfare organizations in the Netherlands started using the ARIJ instruments. In this dissertation, the reliability and validity of the safety and risk assessment instrument were studied and improved, so that a wide range of these agencies can use the ARIJ. In the last few years other types of agencies have started to use the ARIJ instruments, including school social work agencies, and pediatric organizations.

It is important that the reliability and validity of the ARIJ instruments be studied in these particular populations in future research. Another strength is that Chapter 3 and Chapter 4 describe the, to our knowledge, first thorough studies on the validity of a child safety assessment instrument. Given the crucial decisions that are made with these types of instruments, it is essential to study and improve the quality of this type of assessment instrument as much as possible. Further, relatively new and advanced statistical approaches were used in this dissertation. In Chapter 5 the interrater and intrarater reliability of the ARIJ instruments were studied by calculating Gwet’s agreement coefficient. This is a promising measure of the reliability that may be able to avoid the kappa paradox (Ait Lbacha et al., 2017; Ko et al., 2013; Wongpakaran, Wongpakaran, & Gwet, 2013; Zec, Soriani, Comoretto, & Baldi, 2017). Additionally, in Chapter 7, the interrelatedness of risk factors for child maltreatment was studied using network analyses. This is a promising statistical method that is increasingly being applied in many different research areas (Epskamp, Borsboom, & Fried, 2018), and that can provide valuable information to improve clinical practice (Fried et al., 2017). This dissertation was the first to apply network analyses in the child maltreatment research field.

This dissertation also has some important limitations that need to be mentioned. All quantitative and qualitative data examined in the studies were retrieved from the child welfare system. For example, the risk factors for child maltreatment (Chapter 6 and 7), the outcome measures of child maltreatment (Chapter 6), and the information provided by the practitioners in the qualitative studies (Chapter 3 and 4) are all part of the child welfare system. This is problematic, as the relation between child maltreatment and the involvement of child welfare is not straight forward (Jenkins, Tilbury, Mazerolle, & Haues, 2017). Some factors cause a disparity in child welfare involvement. For example, Black families are overrepresented in the American child welfare system (Antwi-Boasiako, et al., 2020), and gender disparities were identified in European child welfare practice (Middel, López López, Fluke, & Grietens, 2020). As the majority of the studies on instruments used in child welfare measure risk factors and child maltreatment with the
information provided by the child welfare system (Van der Put, Boekhout van Solinge, & Assink, 2017), these disparities can bias the results on the quality of instruments. Similarly, the measures of risk factors and child maltreatment used in this dissertation were provided by child welfare agencies, which may lead to biased results. It is therefore crucial that measures that are independent of the child welfare system are used in future research, such as self-reports or teacher reports.

Additionally, there is no golden standard for measuring child maltreatment (including future child maltreatment and immediate child safety). In both Chapter 4 and Chapter 6, the outcomes of the instruments were compared to measures of child maltreatment, of which we know that these are far from perfect. For example, the majority of child maltreatment cases are not reported to the hotline services, as research estimated that only 1 in 10 cases of child maltreatment is reported (Everson et al., 2008; Fergusson, Horwood, & Woodward, 2000; Finkelhor, 2008; MacMillan, Jamieson, & Walsh, 2003). Moreover, studies on the prevalence of child maltreatment have shown very different rates depending on the measurement method (Euser et al., 2013; Stoltenborgh, Bakermans-Kranenburg, Alink, & Van IJzendoorn, 2015). Self-reports show much higher rates of child maltreatment than reports from the child welfare system (Cyr, 2013; Finkelhor, Ormrod, Turner, & Hamby, 2005; Fergusson, Horwood, & Woodward, 2000; MacMillan, Jamieson, & Walsh, 2003). Further research should examine whether it is possible to come closer to a “golden standard” in research on instruments used in child welfare.

8.4 IMPLICATIONS FOR CLINICAL PRACTICE

The findings in this dissertation led to new versions of the ARIJ safety and risk assessment instruments. It is recommendable for clinical practice to use these new instrument versions, as the ARIJ was improved in the following ways. First, multiple immediate safety threats were added to the safety assessment instrument to improve its validity. In short, these were emotional abuse, harm inflicted by others, a caregiver’s psychiatric disorder that imposes an immediate threat to the child, and a child’s psychiatric/behavioral problems that impose an immediate threat to him/herself. Second, some aspects were added to the instructions of the instrument, so that practitioners are guided in assessing the severity of the safety threats that are to be assessed in a given case. These aspects include the child’s vulnerability as well as historical aspects, such as previously provided care to the family. Third, a definition of immediate child safety is presented in the instructions of the instrument to improve its usability. Fourth, the instrument’s safety outcomes were adjusted to avoid confusion about the implications of the outcomes. Finally, the items and descriptions were rewritten to increase readability and clarify content.

The ARIJ risk assessment instrument was also improved in different ways. First, seven new risk factors were added to the instrument and the cumulative risk variable
Chapter 8

on which the risk classification is based. Therefore, the instrument can now be used for a more comprehensive assessment of the risk factors in a family. Second, the risk classifications were renewed and only based on cumulative risk, so that the instrument outcomes became more stable and valid across different agencies using the instrument. However, it is important to keep in mind what the predictive validity of the instrument is for the specific population for which the instrument is used. Further research showed that the predictive validity of the new risk classification varied for the populations of different agencies (Vial, Van der Put, & Assink, 2020). The predictive accuracy is excellent for families served by child and family support services, medium for community outreach services, and moderate for child protection services. Third, the simplified risk classifications make it easier for practitioners to calculate the risk themselves and to understand how the risk is estimated and can be reduced. Fourth, the new dynamic risk classification comprises five instead of three risk groups. In this way, smaller, but statistically meaningful changes in risk can be measured over time. Finally, the distinction between dynamic and static risk factors was also made more apparent to the user.

Even though the changes to the risk assessment instrument improved its predictive validity, we know that risk assessments performed with actuarial instruments are not perfect. Therefore, it may seem appropriate for practitioners to adjust the actuarial risk classification. However, research has shown that allowing practitioners to adjust an actuarial risk classification does not enhance its accuracy (Dawes, Faust, & Meehl, 1989). There are indications that allowing practitioners to change the risk classification to a high risk classification, even though the actuarial risk classification did not indicate a high risk, might improve its accuracy (Van der Put et al. 2017). So if a practitioner’s assessment using the ARIJ risk assessment instrument does not reflect their reasoning on a child’s risk of future child maltreatment, then a balanced argument could be put forward to change the risk classification to a higher risk classification. However, it is advisable to be very reserved when it comes to changing the outcomes of the instrument.

The findings in Chapter 7 help to better understand the causes of child maltreatment, which will ultimately help us better understand how we can intervene in maltreating families, and how we can prevent child maltreatment. Additionally, this chapter provides hypotheses on the risk factors that are most relevant for clinical practice. The most central risk factors have the biggest impact on other risk factors and, therefore, reducing these risk factors has the largest impact on other risk factors. For example, for the families served by the child protection agency, "Caregiver was maltreated as a child" was one of the most central risk factors and, therefore, may be one of the clinically most relevant risk factors. It is very well possible that caregivers with a history of child maltreatment victimization suffer from unresolved trauma problems that need to be targeted in treatment (Assink et al., 2018). Given the current results it is to be expected that treating these unresolved trauma problems will also reduce the impact of other risk factors, so that the overall risk for the (recurrence of) child maltreatment is
General Discussion

reduced. However, further research is needed to study these central risk factors in more
detail. Relevant questions that can be posed in future research are for instance: Does
targeting central risk factors contribute to the reduction of other risk factors? Does the
effectiveness of interventions increase when central risk factors are targeted? It can
be assumed that more firm recommendations for clinical practice can be formulated,
as our knowledge on risk factor centrality increases.

8.5 FUTURE DIRECTIONS

We will most likely never be able to perfectly assess child maltreatment, but it is worth
searching for ways in which assessments and instruments can be improved further.
One way may be to improve the instruments’ items measuring the different immediate
safety threats and risk factors. First, it may be possible that the reliability of how risk
factors are measured can be improved, which may also improve their validity. The
reliability of multiple versions of risk factor items should be tested, such as the risk
factor “Caregiver has a history of abusing a child”, which can be measured in different
ways: the child indicates that he/she has been abused before, the caregiver admits
that he/she abused the child before, child protection services have previously been
involved, or previous reports have been made to the hotline services. These are all
somewhat different ways to determine if a caregiver abused a child before. Different risk
assessment instruments use different methods to measure risk factors, and we should
examine which of these methods is most reliable and valid. Second, adding risk factors
may also have the potential to improve the risk assessment instrument. International
literature identified many different risk factors (Assink et al., 2019; Mulder, Kuiper, Van
der Put, Stams, & Assink, 2018; Stith et al., 2009). Not all these factors are assessed with
the ARIJ risk assessment instrument or have been examined, for example, family size
or non-biological parents. Additionally, it would be interesting to study if there are risk
factors that practitioners miss in the instrument (this study could be similar to Chapter
3 of this dissertation). However, adding too many risk factors to the instrument could
lower its usability. Therefore, it is important to consider the instrument’s usability when
deciding on the inclusion of additional risk factors.

A next step in research on assessment procedures in child welfare should be to
study how the outcomes of assessments should be applied to interventions to increase
their effectiveness. If a child is deemed to be in immediate danger, then how do you
develop a safety plan that is in line with the outcomes of the safety assessment?
Additionally, if a child has a high risk for future child maltreatment, what does an
intense intervention look like? The RNR-model, and its principles, provide the basis for
assessment procedures and interventions in child welfare. However, it has not been
studied if applying these principles to assessments and interventions indeed improves
their accuracy and effectiveness in child welfare. This should be studied, preferably
using experimental research methods comparing child welfare assessments and
interventions in which these principles are applied to assessments and interventions to which the RNR-principles are not applied. Moreover, it should be studied whether using the ARIJ instruments, and applying their outcomes, improves the effectiveness of interventions.

To completely study the RNR-model in child welfare, the needs and responsivity principle should also be taken into account. For the assessment of a family’s needs and responsivity, two assessment instruments are currently being developed (Van der Put, Assink, Gubbels, Van Lent, & Stams, 2018). Structurally assessing a family’s needs and responsivity will help with a better application of the RNR principles. However, “just” developing these instruments is not enough. We should also study how specific risk factors or needs should be addressed. If a caregiver has a substance abuse problem, there is a large body of research available on what the most effective interventions are. But for many other risk factors, especially static risk factors, it is not straightforward what an effective way to intervene or reduce the impact of these risk factors would be. For example, a central risk factor for the families served by child protection services was “Caregiver was maltreated as a child”. If this risk factor is present, it is uncertain what an intervention should look like. A caregiver may need trauma treatment, although parenting support may also be required, as the caregiver may need to learn more about appropriate parenting behaviors.

The ARIJ risk assessment instrument now contains a dynamic risk classification that can measure the risk of future child maltreatment based on the dynamic risk factors in more detail. However, it should be studied to what extent dynamic risk factors actually change over time. Remarkably, little research has been conducted on this subject (Beech, Friendship, Erikson & Hanson, 2002; Beggs & Grace, 2010). To know how well this dynamic risk classification can be used to measure changes in risk, families should be assessed over time. It may be necessary to develop risk factor measurement methods that can measure (smaller) changes. Perhaps this can be done by focusing more on the different aspects of a risk factor, similar to the assessment of symptoms of a mental health disorder. For a risk factor such as a caregiver’s substance abuse there may be measurement methods available to assess this risk factor more dynamically. For other risk factors, it may be more complex to develop more dynamic methods to measure them.

Finally, another way to improve safety and risk assessment procedures is by expanding our knowledge on the etiology of child maltreatment. As shown in Chapter 7, applying network analysis to risk factors for child maltreatment has great potential to provide more information on how risk factors interact and cause the development of child maltreatment. Learning more about the development of child maltreatment will ultimately enable us to improve assessment procedures, and interventions for child maltreatment.