The contribution of client factors, therapeutic alliance, expectation and specific method to crisis change and safety change in family crisis intervention

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Abstract

The present study tested the contribution of client factors, therapeutic alliance, clients’ expectations of treatment effects and the specific treatment method to crisis change and safety change in 148 families receiving family crisis intervention. The Big Four model of therapeutic change assumes that especially client factors and the therapeutic alliance contribute to change in treatment outcomes, whereas the client’s expectations and the specific treatment method are considered to be less important. The present study, however, showed that the specific treatment method in family crisis intervention explained as much variance as the therapeutic alliance in crisis change and far most of the variance in safety change, followed by the therapeutic alliance, client factors and client’s expectation. At the same time, therapeutic change was largely dependent on the client. The solution-focused approach, network-directed approach and safety assessment contributed uniquely to positive treatment outcomes. Furthermore, the Big Four components were found to be interrelated.
Abstract

The present study tested the contribution of client factors, therapeutic alliance, clients’ expectations of treatment effects and the specific treatment method to crisis change and safety change in 148 families receiving family crisis intervention. The Big Four model of therapeutic change assumes that especially client factors and the therapeutic alliance contribute to change in treatment outcomes, whereas the client’s expectations and the specific treatment method are considered to be less important. The present study, however, showed that the specific treatment method in family crisis intervention explained as much variance as the therapeutic alliance in crisis change and far most of the variance in safety change, followed by the therapeutic alliance, client factors and client’s expectation. At the same time, therapeutic change was largely dependent on the client. The solution-focused approach, network-directed approach and safety assessment contributed uniquely to positive treatment outcomes. Furthermore, the Big Four components were found to be interrelated.

Introduction

When families are in crisis and the safety of children is at stake, family crisis intervention aims to promote adequate family functioning in order to end the crisis and to restore the child’s safety with the ultimate prospect of family preservation (e.g. Kinney, Haapala, & Booth, 1991; Rapoport, 1970; Staudt & Drake, 2002). However, as a crisis is thought to be time-limited, 4-6 weeks (Golan, 1987), the question arises whether the intervention (substantially) contributes to crisis change and safety change during the short period of a family crisis or whether these changes are predominantly dependent on client factors. The present study examines this question from the perspective of the Big Four model of therapeutic change.

The Big Four model assumes that four factors are responsible for therapeutic change: client factors (e.g. demographic characteristics and problem severity), common therapeutic factors designated as those treatment elements that are not specific to any treatment method (e.g. therapeutic alliance), the client’s expectations (or the placebo effect), and the specific treatment method (Lambert, 1992; Lambert, Shapiro, & Bergin, 1986). Lambert and colleagues conducted a narrative review of psychotherapy literature and concluded that primarily client-related factors contribute to treatment outcomes, holding client factors responsible for 40% of the variance accounted for and the client’s expectation of intervention success for 15%. Common therapeutic factors or non-specific factors, including therapeutic alliance, and the specific method of the intervention were estimated to account for 30% and 15% of the variance, respectively. Despite of a somewhat varying terminology with respect to common factors (e.g. Catty, Winfield, & Clement, 2007; Schrank, Staghellini, & Slade, 2008; Van Yperen, Van der Steege, Addink, & Boendermaker, 2010), comparable Big Four models assume that the contribution of the specific treatment method is expected to be modest too (Carr, 2009; Wampold, 2001).

The idea that the specific treatment method only explains a small percentage of the variance, however, has become controversial (Budd & Hughes, 2009). Recently, it has been suggested that the percentages accounted for by each of the Big Four components could deviate from the original percentages in favor of the specific treatment method (Van Yperen et al., 2010). The Big Four model percentages were based on estimates rather than empirical evidence from intervention research. Furthermore, they were based on literature on adult therapy settings mostly. Moreover, the Big Four model does not take into account...
the developments that took place in psychotherapy and child and youth care in the past decades. For instance, new interventions have been developed that show incremental efficacy when compared to standard evidence based treatment (e.g. Evans et al., 2003; Rodenburg, Benjamin, De Roos, Meijer, & Stams, 2009). Moreover, the use of evidence-based treatment has become more common in child and youth care, which in itself should substantially increase the effectiveness that can be attributed to the specific method of intervention (De Swart et al., 2011; Weisz, Jensen-Doss, & Hawley, 2006). It is therefore plausible to suggest that the relative contribution of the specific intervention method or technique to treatment success is considerably larger nowadays than it was 25 years ago.

One of the most researched common or non-specific therapeutic factors is the therapeutic alliance. To date, there is a vast body of empirical evidence showing that the therapeutic alliance facilitates therapeutic change (Karver, Handelsman, Fields, & Bickman, 2006; Martin, Garske, & Davis, 2000; Norcross, 2010). Some have argued that the therapeutic alliance should even be seen as the only therapeutic factor of interest (Kohut, 1984; Rogers, 1951; 1957), which is a claim that has never been corroborated. It may be more appropriate to conclude that the effect of the therapeutic alliance at least partly depends on other factors. For example, therapeutic alliance proved to be more strongly associated with treatment outcomes when the alliance was measured at a later stage of the therapy, when it was based on therapist reports instead of client reports, when externalizing problems were targeted instead of internalizing problems, and when global functioning was measured rather than specific symptoms (Motta & Tobin, 1992; Shirk & Karver, 2003). Barber et al. (2006) showed that, in individual drug counseling, the therapist’s adherence to the treatment method was irrelevant for treatment outcome in case of a strong therapeutic alliance, but gained importance in case of a weak alliance.

An example showing that the contribution of the specific intervention method may be larger than the therapeutic alliance is found in Hoagwood’s review (2005) of family-based services in children’s mental health, showing that when the relative contributions were examined, only the technique and not the therapeutic alliance was related to positive treatment outcomes. Stevens, Hynan and Allen (2000) showed in their meta-analysis of treatment effects in psychotherapy, addressing well being, pathological symptoms and life functioning, that, although both the specific treatment and the placebo treatment exceeded the effects of the no-treatment condition, the magnitude of specific treatment effects was about twice as large as that of the effects of the placebo treatment (that could involve a
thertapeutic alliance). Interestingly, whereas for clients with less severe problems the effects of the specific treatment and the placebo treatment were almost identical when dealing with more severe problems of clients, only the specific treatment was effective. This may also apply to families in crisis, as severity of problems in crisis is evident (e.g. Caplan, 1964; Myer & Conté, 2006; Rapoport, 1970).

Thomas (2006) addressed the issue of the relative contribution of each Big Four component by examining the perceptions of clients and therapists engaged in marriage and family therapy. The results showed that although both clients and therapists perceived that clients contributed more to change in the therapeutic process than therapists did, clients did perceive a relatively larger contribution of the specific method than estimated in the current Big Four model. While less was attributed to client factors, clients of family therapy attributed 28% to the specific method opposed to the estimated 15%, without diminishing the contribution of the therapeutic alliance.

Although the Big Four components represent four categories, no attempts have been made to examine the unique contribution of the Big Four components to treatment success or therapeutic change. It is plausible that these components share variance in the prediction of therapeutic change, because the components may be considerably interrelated (e.g. Carr, 2009; Sprenkle & Blow, 2006; Wampold, 2001). Recently, Norcross and Lambert (2010) concluded that there is a “deep synergy between treatment methods and the therapeutic relationship, constantly shaping and informing each other”. For instance, It has been found that therapeutic alliance can be stimulated by professional appliance of specific methodical techniques (Stams, Buist, Decovic, & Kroon, 2005; Wampold, 2001). Furthermore, whereas medicine placebos are thought to operate directly through client’s expectations, the therapeutic alliance, by its interrelatedness with treatment techniques and client’s expectations, may operate in a more complex way (Wampold, Minami, Tierney, Baskin, & Bhati, 2005). Moreover, some client factors could be interrelated with the therapeutic alliance, as client type and severity of psychopathology were found to interact with the response of therapists (Bohart, Elliot, Greenberg, & Watson, 2002) and were found to be associated with client’s expectations of treatment success (Nock & Kazdin, 2001).

The present study examines the relative contribution of the Big Four components to crisis change and safety change in the Family Crisis Intervention Program (FCIP; Eijgenraam, Van Vugt, & Berger, 2007; Vogelvang, Melissen, & Vermeiden, 2005). FCIP is modeled after the family preservation Homebuilders model (Kinney, Madsen, Fleming, & Haapala,
The Homebuilders model is a goal-directed, flexible, intensive, in-home intervention with a quick start (within 24 hours), a short duration (4-6 weeks) and a multimodal therapeutic approach, which is systemic, network-directed, competence-directed, solution-focused and practical. The trained and supervised social workers serve a small caseload. In FCIP, analysis of the family situation and assessment and promotion of safety are also emphasized.

The following research questions are addressed: (1) What are the percentages of crisis change and safety change attributed to the Big Four in total, and what are the relative contributions of the Big Four components, that is, client factors, common therapeutic factors (therapeutic alliance), clients’ expectations and the specific treatment method of FCIP? (2) What factors within the specific method are uniquely related to crisis change and safety change, and (3) are the Big Four components interrelated?

**Methods**

**Participants**
A total of $N = 148$ families and $N = 28$ social workers participated in this study. The families had an average 2.26 children ($SD = .97$); 54.1% were single-parent families. The average age of the children was 11.11 years ($SD = 4.97$; range 0-18). The gender distribution was 55.3% girls and 44.7% boys. The child was subject to a supervision order in 28.4% of the families, while 46.6% of the families had received intervention previously.

A total of 28 social workers participated in the study, of whom 57.1% were female and 42.9% were male, and who had an average age of 36.86 years ($SD = 10.07$). Their work experience was on average 3 years ($SD = 2.13$) within FCIP and 7 years ($SD = 6.25$) within the youth care organization.

**Procedure**
Between November 2007 and December 2008, the clients of FCIP were invited to participate in the study by their social workers during the first home visit. When clients agreed to participate, a researcher visited them in the first week of FCIP. Participation of clients was voluntarily and clients received written and verbal information. All participants signed an informed consent form. Clients reported on their individual family characteristics and their expectations for successful intervention by FCIP. The social workers filled out
one questionnaire for each family that participated in the study, which was completed after
the intervention, and reported on the quality of the therapeutic alliance and on how the
specific method was applied per case. Furthermore, the social workers reported on the two
dependent variables, crisis change and safety change, scoring the extent of crisis and safety
in the family both at the moment of referral and after the intervention.

Measures

Crisis change. Social workers reported the extent of crisis in the family by answering the
following questions: “To what extent was a crisis the case at the start?” and “To what
extent was the crisis ended at the end of FCIP?” Both questions were scored on a scale of 1-
5, in which 1 = not at all and 5 = very much.

Safety change. Social workers reported the level of safety in the family by giving
answers to the following questions: “To what extent was the safety of family members at
stake at the start of FCIP?” and “To what extent was it safe in the family at the end of
FCIP?” Both questions were scored on a scale of 1-5, in which 1 = not at all and 5 = very
much.

Client factors. Parents and children reported on their date of birth, their sex, their
highest level of completed formal education (elementary school up to university degree)
and on whether they had received professional care previously. Parents reported
additionally on the number of children in the family and on whether the family was either a
one-parent or a two-parent family. Social workers reported on whether the child was
subject to a supervision order (yes or no).

Therapeutic alliance. Social workers reported on the quality of the therapeutic
alliance by responding to the question to what extent a good therapeutic alliance with the
client existed (1 = not at all, 5 = very much).

Expectation. Clients reported on their expectation of successful intervention by
FCIP by answering the following questions: ‘I have positive expectations of FCIP’ and ‘I
am confident that FCIP can help our family’.

Specific method. Social workers reported on the specific approach in FCIP for
each family by answering the following questions: ‘To what extent a clear analysis of the
family situation was made?’, ‘to what extent the formulated goals were in accordance with
the problems that existed?’ Two questions concerned the extent to which social workers
had been able to ‘properly assess safety in the family’ (safety assessment) and the extent to
which they regarded themselves capable of influencing safety (perceived self-efficacy). Additionally, social workers indicated to what extent the approach was systemic, network-directed, competence-directed, solution-focused and practical (using a 5-point scale in which 1 = not at all, 5 = very much). It was also registered whether a social worker was available immediately after referral, whether FCIP started within 24 hours after referral, and whether FCIP exceeded a period of 4 weeks.

Statistical analyses

The Big Four model was tested using multilevel regression analyses (Goldstein, 1995), taking into account that families are nested within social workers who deliver treatment. Multilevel analysis enables examining the degree to which changes in outcome variables can be attributed to differences between clients who are nested within social workers (level 1 or family level) and differences between social workers who deliver treatment (level 2 or social worker level). Using the approach of Snijders and Bosker (1999), we calculated the amounts of variance accounted for by each Big Four component both at the family level and the social worker level and the total amount of variance accounted for by the Big Four as a whole (all variables in one model). The client factors and specific method component each consisted of a number of variables that were entered blockwise in the multilevel regression analysis. Missing values were replaced by imputed values that were estimated by means of expectation maximalization (Dempster, Laird, & Rubin, 1977).

The multilevel regression analyses proceeded in several steps. In the first step, a null-model or intercept-only model containing an outcome variable (crisis change or safety change) and no explanatory variables was fitted to the data as a baseline. In the null-model the variance is partitioned across two levels. The differences in crisis change and safety change that can be attributed to families are distributed at level 1, and the differences in crisis change and safety change that can be attributed to social workers are distributed at level 2. In the second step, it was examined by means of a Chi-square test whether a model with all Big Four variables fitted the data significantly better than the base-line model, and subsequently how much variance was explained by the Big Four as a whole. In the third step, similarly, every single Big Four component was tested against the null model, and it was examined how much variance was explained by the separate Big Four components. These analyses were conducted for crisis change and safety change separately. In the fourth
step, we tested which of the specific method techniques uniquely contributed to crisis change and safety change by inspecting the regression coefficients that were standardized for ease of interpretation (betas). In the fifth step, we computed the relative contribution of each Big Four component to crisis change and safety change from the explained variances that were derived from the third step, which makes the percentages comparable to estimates of the contribution of the Big Four to therapeutic change in previous studies that count up to 100%.

Finally, we examined the interrelatedness (shared variance) of the Big Four components by comparing the total variance accounted for derived from the multilevel model containing all Big Four components with the summation of the explained variances derived from the four multilevel models testing each Big Four component separately. Subtracting the explained variance of the total Big Four model from the summation of explained variance of the separate Big Four components gives the shared variance, which shows the degree of interrelatedness.

**Results**

**Crisis change**

The null-model results in Table 1 show that 73% – 1.747 / (1.747 + 0.637) – of the variance in crisis change could be attributed to differences among families (level 1), and that the remaining 27% – 0.637 / (1.747 + 0.637) – could be attributed to differences between social workers (level 2). The multilevel regression model with all Big Four components entered as explanatory variables significantly improved model fit and accounted for 23.2% of the variance in crisis change: $X^2 (20, N = 139) = 39.31, p < .01$. Most of the variance accounted for was distributed at the family level, namely, 17.4%. The explained variance at the social worker level was 5.8%.

The multilevel model with only client factors accounted for 6.5% of the variance in crisis change, but did not significantly improve model fit: $X^2 (6, N = 139) = 8.82, p = .18$. Therapeutic alliance entered as an explanatory variable accounted for 17.5% of the variance in crisis change, and significantly improved model fit: $X^2 (1, N = 139) = 21.12, p < .001$. Most of the variance accounted for was distributed at the family level, namely, 12%. The explained variance at the social worker level was 5.5%. Expectation accounted for 0.6% of the variance in crisis change, and did not significantly improve model fit: $X^2 (1, N = 139) =$
0.80, $p = .37$. Specific method, finally, accounted for 17.5% of the variance and significantly improved model fit: $X^2 (12, N = 139) = 24.34, p < .05$. Most of the variance accounted for was distributed at the family level, namely, 12.4%. The explained variance at the social worker level was 5.1%.

The solution-focused approach showed a positive contribution to crisis change: $b = .18, p < .05$.  

Table 1. Multilevel Analysis of Crisis Change

<table>
<thead>
<tr>
<th>Null Model</th>
<th>Big Four Client Factors</th>
<th>Therapeutic Alliance</th>
<th>Expectation Specific Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variance components</td>
<td></td>
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</tr>
<tr>
<td>Family level</td>
<td>1.747</td>
<td>1,305</td>
<td>1.642</td>
</tr>
<tr>
<td>Social worker level</td>
<td>0.637</td>
<td>0.511</td>
<td>0.591</td>
</tr>
</tbody>
</table>

Explained variance

| Family level        | 23.8%                   | 6.3%                 | 16.4%                      | 0.6% | 16.9%                      |
| Social worker level | 21.7%                   | 7.0%                 | 20.5%                      | 0.7% | 19.2%                      |

Adj. explained variance

| Family level        | 17.4%                   | 4.6%                 | 12.0%                      | 0.4% | 12.4%                      |
| Social worker level | 5.8%                    | 1.9%                 | 5.5%                       | 0.2% | 5.1%                       |

Total explained variance: 17.5%
Table 1.

**Multilevel Analysis of Crisis Change**

<table>
<thead>
<tr>
<th></th>
<th>Null Model</th>
<th>Big Four</th>
<th>Client Factors</th>
<th>Therapeutic Alliance</th>
<th>Expectation</th>
<th>Specific Method</th>
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</thead>
<tbody>
<tr>
<td><strong>Variance components</strong></td>
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<tr>
<td>Family level</td>
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<td>1.305</td>
<td>1.642</td>
<td>1.512</td>
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<td>0.632</td>
<td>0.501</td>
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<tr>
<td>Family level</td>
<td>23.8%</td>
<td>6.3%</td>
<td>16.4%</td>
<td>0.6%</td>
<td>16.9%</td>
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<tr>
<td>Social worker level</td>
<td>21.7%</td>
<td>7.0%</td>
<td>20.5%</td>
<td>0.7%</td>
<td>19.2%</td>
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<td><strong>Adj. explained variance</strong></td>
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<tr>
<td>Family level</td>
<td>17.4%</td>
<td>4.6%</td>
<td>12.0%</td>
<td>0.4%</td>
<td>12.4%</td>
<td></td>
</tr>
<tr>
<td>Social worker level</td>
<td>5.8%</td>
<td>1.9%</td>
<td>5.5%</td>
<td>0.2%</td>
<td>5.1%</td>
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<td><strong>Total explained variance</strong></td>
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<tr>
<td>Family level</td>
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<td>17.5%</td>
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<td>Social worker level</td>
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<tr>
<td><strong>Χ²</strong></td>
<td>39.31**</td>
<td>8.82</td>
<td>22.31***</td>
<td>0.80</td>
<td>24.34*</td>
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<td>1</td>
<td>1</td>
<td>12</td>
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</tr>
</tbody>
</table>

*Note.* Family level: N = 139; Social worker level: N = 28. * p < .05 ** p < .01 *** p < .001

1 The distribution of explained variance at level 1 and level 2 (e.g. 23.8% of the differences between families in crisis change is explained by the Big Four, and 21.7% of the differences between social workers).

2 The distribution of explained variance is adjusted for the partitioning of overall (unexplained) variance between level 1 and level 2, namely, the initial variance components of the null model (e.g. 17.4% of the overall differences in crisis change is explained by the Big Four at the family level, and 5.8% of the overall differences in crisis change is explained by the Big Four at the social worker level).

3 Explained variance of the model, summation of level 1 and 2 adjusted explained variance.
Safety change

The null-model in Table 2 shows that $85\% - \frac{1.845}{1.845 + 0.324}$ of the variance in safety change could be attributed to differences among families (level 1), and that the remaining $15\% - \frac{0.324}{1.845 + 0.324}$ could be attributed to differences between social workers (level 2). The model with all Big Four components accounted for $19.9\%$ of the variance in safety change, and did significantly improve model fit: $X^2(20, N = 143) = 35.65, p < .05$. Most of the variance accounted for was distributed at the family level, namely, $17.2\%$. Only $2.2\%$ was explained at the social worker level.

The multilevel model with client factors accounted for $3.5\%$ of the variance in safety change, and did not significantly improve model fit: $X^2(6, N = 139) = 6.23, p = .40$. Therapeutic alliance accounted for $5\%$ of the variance in safety change and significantly improved model fit: $X^2(1, N = 139) = 4.91, p < .05$. The variance accounted for at the family level was $3.7\%$, whereas the explained variance at the social worker level was $1.3\%$. Expectation accounted for $1.3\%$ of the variance in safety change, only distributed at the family level, and did not significantly improve model fit: $X^2(1, N = 139) = 2.58, p = .11$. Specific method, finally, accounted for $18.1\%$ of the variance and significantly improved model fit: $X^2(12, N = 139) = 32.64, p < .01$. Again, most of the variance accounted for was distributed at the family level, namely, $16.2\%$. The explained variance at the social worker level was $1.9\%$.

The following factors were positively associated with increase in safety: the network approach ($b = .28, p < .001$), assessment of safety ($b = .14, p < .05$), and the solution-focused approach ($b = .26, p < .01$).
Table 2.

Multilevel Analysis of Safety Change

<table>
<thead>
<tr>
<th></th>
<th>Null Model</th>
<th>Big Four</th>
<th>Client Factors</th>
<th>Therapeutic Alliance</th>
<th>Expectation</th>
<th>Specific Method</th>
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<td>19.9%</td>
<td>3.5%</td>
<td>5.0%</td>
<td>1.3%</td>
<td>18.1%</td>
<td></td>
</tr>
</tbody>
</table>

X² | 35.65* | 6.23 | 4.91* | 2.58 | 32.64** |

df | 20 | 6 | 1 | 1 | 12 |

Note. Family level: N = 143; Social worker level: N = 28. * p < .05 ** p < .01 *** p < .001

1 The distribution of explained variance at level 1 and level 2 (e.g. 20.8% of the differences between families in safety change is explained by the Big Four, and 14.9% of the differences between social workers).

2 The distribution of explained variance is adjusted for the partitioning of overall (unexplained) variance between level 1 and level 2, namely, the initial variance components of the null model (e.g. 17.7% of the overall differences in safety change is explained by the Big Four at the family level, and 2.2% of the overall differences in safety change is explained by the Big Four at the social worker level).

3 Explained variance of the model, summation of level 1 and 2 adjusted explained variance.
**Comparison of Big Four models**

The relative contributions of the Big Four components are presented in Table 1 (crisis change) and Table 2 (safety change). In total, the Big Four explained 23.2% of the crisis change and 19.9% of the safety change. Concerning crisis change, both the specific method and the therapeutic alliance explained most of the variance, followed by client factors and expectation. With respect to safety change, the specific method explained far most of the variance. The therapeutic alliance explained second most, and after that came client factors and expectation, respectively. In both models, the explained variances of the intervention components (therapeutic alliance and specific method) were higher than those of the client components (client factors and expectation). At the same time, most of the variance, also in the intervention categories, was explained at level 1 (differences between families). The results of the relative contributions to crisis change and safety change, compared with previous Big Four models, are presented in Table 3. It can be concluded that client factors and expectations accounted for far less variance than was estimated in the previous Big Four models and, instead, the specific method explained far more variance.

### Table 3.

**The Relative Contribution of the Big Four Components to Crisis Change and Safety Change in Comparison with Previous Big Four Models.**

<table>
<thead>
<tr>
<th></th>
<th>Crisis change</th>
<th>Safety change</th>
<th>Lambert et al. (1992) therapists</th>
<th>Thomas (2006) clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client factors</td>
<td>15.4%</td>
<td>12.5%</td>
<td>40%</td>
<td>22%</td>
</tr>
<tr>
<td>Therapeutic Alliance</td>
<td>41.6%^</td>
<td>17.9%^</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Expectation</td>
<td>1.4%</td>
<td>4.7%</td>
<td>15%</td>
<td>27%</td>
</tr>
<tr>
<td>Specific Method</td>
<td>41.6%^</td>
<td>64.9%^</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Total variance</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

* p < .05 ** p < .01 *** p < .001 (significance of the contribution)

**Note.** The percentages reflect relative contributions of the Big Four factors to the explained variance, which counts up to 100%.
**Interrelatedness of the Big Four categories**

It was found that the sum of the Big Four percentages for each component exceeded the explained variance that was found when the total model was tested: with respect to crisis change, the sum of the Big Four components explained 42.1% of the variance whereas the Big Four model explained only 23.2% and regarding safety change these percentages were 27.9% opposed to 19.9% (see Table 1 and Table 2). The additional 18.9% (crisis change) and 8% (safety change) can be considered as overlap between the Big Four components, which indicates interrelatedness.

**Discussion**

The Big Four model explained 23.2% of the variance in crisis change and 19.9% of variance in safety change. Although the intervention-related components (i.e., therapeutic alliance and the specific method) explained most of the variance, these contributions to change were largely dependent on the client, i.e. accounted for at the family level. Within the specific method, the solution-focused approach, the network-directed approach and proper assessment of safety were found to be program characteristics that are in particular related to change. Furthermore, the Big Four components proved to be interrelated, illustrated by the shared variance in the prediction of crisis and safety change.

In line with expectations, the role of the specific method was found to be more prominent than it was assumed in the Big Four model of Lambert (1992; Lambert et al., 1986). Whereas the importance of the therapeutic alliance has been confirmed in the present study, the specific method also proved to contribute substantially. These results underscore the idea that social workers should invest both in building a therapeutic relationship and appliance of specific techniques that are part of specific programs (e.g. Eames, et al., 2009; Gearing, et al., 2010; Perepletchikova, 2009).

Somewhat different relative contributions of the Big Four categories were found for crisis change and safety change. The therapeutic alliance contributed as much to crisis change as the specific method did, while the specific method explained far more variance in comparison with the therapeutic alliance regarding safety change. Concerning crisis change a good therapeutic alliance possibly provides clients with support, hope and confidence which could result in a decrease of crisis experience, whereas for safety change certain specific techniques may be required to obtain systematically structured information and to
influence behavior. It has been suggested that the therapeutic alliance may be less important in short-term interventions (Shirk & Karver, 2003; Stams et al., 2005; Van Yperen et al., 2010). Nevertheless, a substantial contribution of the therapeutic alliance to both crisis change and safety change was found. Notably, crisis interventions are not only short but also intensive, characterized by multiple contacts between clients and social workers a week (e.g. Kinney, Haapala, & Booth, 1991; Tully, 2008) in contrast with longer but less intensive interventions.

As the relative contribution of the Big Four components apparently can differ for various outcome measures, it would be valuable to test the contribution of the Big Four also with other relevant outcome measures in family crisis intervention, such as family functioning (e.g. McCroskey & Meezan, 1997; Rossi, 1992; Thieman & Dail, 1992; Tully, 2008). In addition, testing the contribution of the Big Four to therapeutic change in other populations than families in crisis, who are the focus of the present research, may provide us with more knowledge on the therapeutic process with other clients in a different context. Just as it was considered premature to generalize the estimated Big Four percentages derived from (adult) therapy settings to the youth care context (Van Yperen et al., 2010), it would be premature to conclude that the Big Four contributions are the same for every therapeutic process, regardless of clients’ problems and specific methods.

Although only the specific method and the therapeutic alliance significantly explained variance in both crisis change and safety change, it must be concluded that most of the variance was found to be accounted for at the family level, showing the importance of the client for intervention success (see Table 1 and Table 2). In other words, even though the therapeutic alliance and the specific method predicted favorable outcomes more than client factors and clients’ expectations did, the client was still crucial for therapeutic change. This is in accordance with the findings of Thomas (2006), who showed that from the perceptions of clients and therapists of family intervention the client was considered essential for therapeutic change while, simultaneously, a substantial contribution of the therapeutic alliance and the treatment method was acknowledged. These findings indicate that the dynamic interaction between the social worker and the client characterizes the therapeutic process, a conclusion that coincides with the interrelatedness that was found between the Big Four components.

The explained variance at the family level for the contribution of the therapeutic alliance and the specific method reveals that the intervention did not have the same
contribution for every client. This suggests that the specific method is not equally suitable for all clients and that the client seems to be conditional for a facilitating therapeutic alliance. This cannot, or only a little, be explained by individual differences between social workers in connecting with clients or appliance of the specific method, as such differences did not account for much variance in crisis change and safety change. It is desirable that the therapeutic approach is not too much dependent on the individual social worker as in that case clients would either be lucky or unfortunate based on the individual qualities of the social worker they encounter (e.g. Barnoski, 2004; Sexton & Turner, 2010). However, that the contribution of the specific method was explained largely by differences between clients also means that some clients did not profit much from the intervention for reasons that remain unknown. There may also be many other important factors than currently included in the Big Four model that could explain variance in therapeutic change, such as problem severity or life events. If we can disclose more of these factors, we might be able to explain more variance and subsequently invest in tailoring interventions better to clients’ needs.

Regarding the specific method, the solution-focused approach had a substantial unique contribution to both crisis change and safety change. In the solution-focused approach the client is considered as an important source for and part of solutions and improvement of his/her own situation (e.g. De Shazer & Berg, 1997; Gingerich, Kim, Stams, & Macdonald, 2011). Additionally, a network-directed approach and safety assessment also contributed considerably and uniquely to safety change, approaches that are also dependent on cooperation with the client. From this perspective, these findings also emphasize the important contribution of the client, or, more precisely, the dynamic interaction between the social worker and the client. During crisis, clients are considered to be more open to (intervention aiming for) change (Staudt & Drake, 2002) during a limited period, requiring a dynamic interaction between social worker and client that facilitates the clients’ change potential optimally.

Several limitations of the present study should be mentioned. First, a substantial part of the variance in the change scores remains unexplained. Therefore, it must be noted that disclosure of other relevant contributors to change should have attention in future research to be able to influence these factors in intervention eventually. Considering that the multilevel analyses revealed that the contribution of the therapeutic alliance was primarily found at the family level but client factors did not explain a large amount of variance, it is
plausible that we were not able to include enough relevant client factors. For example, problem severity was not included. Moreover, we have only included variables that are part of the Big Four in the present study, with therapeutic alliance as the isolated common or non-specific factor. Second, the present study contains many one-item questions and the scores in this study reflect mostly the perceptions of social workers. It would be interesting to replicate this type of analyses with more extensive instruments and client scores. By doing this, outcome measures such as (changes in) parenting stress and parent-child interaction could also be included. Third, not all components contained an equal number of variables, what might have influenced the (lack of) explained variance in components with less variables. It must be noted, however, that the therapeutic alliance showed a substantial contribution when compared with client factors, which contained more variables. It may therefore be more important to establish whether the Big Four components were well represented or underrepresented by the included variables.

Notwithstanding the limitations, the present study points out that the specific method should be considered important. For family crisis intervention, specifically the solution-focused approach, the network-directed approach, safety assessment and the therapeutic alliance are relevant to changes in crisis and safety. Additionally, the results showed that the Big Four factors are interrelated, which underscores that not only client characteristics or social worker characteristics but also the dynamic interaction between them is relevant for therapeutic change. Furthermore, it highlights the importance of additional research on relevant (Big Four) factors of intervention. It must be concluded that therapeutic change largely depended on clients, also the amount of variance that was accounted for by the therapeutic alliance and the specific method. By disclosing more of the therapeutic process that involves the interaction between the social worker and the client, we might be able to provide social workers with more knowledge and techniques to optimally utilize the change potential of clients.