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# Measuring program fidelity in case management for high risk families. Validation of the Functional Family Parole-Global Rating Measure

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**Abstract**

● *Summary:* Program fidelity instruments are a key ingredient for clinical supervision and implementation as well as effectiveness studies. This study examines the factor structure of the Functional Family Parole services Global Rating Measure (FFP-GRM); the program fidelity instrument of Functional Family Parole services for case management in youth parole, child protection and child welfare services. Between October 2012 and February 2015, program fidelity was measured with the FFP-GRM by Functional Family Parole supervisors. Confirmatory factor analysis was performed on 380 cases and internal consistency reliability coefficients were calculated.

● *Findings:* Confirmatory factor analyses showed that the 33-item and four-factor model of the FFP-GRM achieved a good fit to the data. Internal validity testing results showed that subscale Cronbach's  $\alpha$  ranged between .82 and .90.

● *Applications:* Findings affirm a good fit to the data and a good-to-excellent internal consistency of the FFP-GRM, which is considered sufficient to justify its use. The results are discussed with regard to the use of fidelity instruments for both clinical and research purposes.

**Keywords**

Social work, case management, child protection, social work research, supervision, youth offending

Functional Family Parole services (FFP) is a case management method based on the principles of Functional Family Therapy (FFT) as an alternative for traditional juvenile parole programs in the United States (Rowland, 2009). FFP is an integrative supervision and case management model for engaging, motivating, assessing and working successfully with high-risk youth and families (Alexander, Waldron, Robbins, & Neeb, 2013). Although FFP is based on the same principles as FFT, there are some differences. First, the FFP case management model consists of three phases instead of the five phases of the FFT program. The trajectory starts with the 'Engage and motivate' phase, followed by the 'Monitor and support' phase and the last phase addresses 'Generalization'. In FFT 'engagement', 'motivation' and 'relational assessment' are separate phases. In FFP these phases are combined. Second, professionals applying FFP work as case managers instead of therapists (Alexander et al., 2013).<sup>1</sup> FFP is a model for intensive family focused case management. FFP professionals assess the risk and protective factors of the family, consider their needs, and subsequently motivate and link the family to services or programs that fit the risks and needs. They monitor and support the family during interventions and help the family generalize the changes to other settings. FFP professionals are trained in cognitive behavioral therapy skills for engaging and motivating families throughout the process.

Both the FFT and FFP model are applied at multiple sites across the world and are subject to research. FFT is implemented in many sites in the United States, New Zealand, Singapore and several countries in Europe, such as Norway, Denmark, Scotland, England, Northern Ireland, Belgium and the Netherlands. Over the last few years, the FFP case management method is implemented at several sites in the United States and in Amsterdam, the Netherlands.

## **Review of FFT & FFP literature**

Empirical studies support the effectiveness of FFT and FFP (Alexander et al., 2013; Rowland, 2009). Several studies demonstrated the effectiveness of FFT when implemented with fidelity (Alexander et al., 2013). The effectiveness of the FFP model has mainly been studied in the United States (Lucenko, Mancuso, & Felver, 2011; Rist, 2011; Rowland, 2009). One study compared FFP to traditional parole services (Washington State Department of Social and Health Services, 2009), and showed that youth in the FFP group had significantly fewer parole revocations at 12 months post release (14.7% fewer). Youth in the highly adherent FFP group had 15.3% reduction in recidivism rates at 18 months post release. The reduced recidivism rates, however, were not found in the 'non-adherent' or 'fairly well' adherent FFP groups. Another study compared youth who were provided FFP after release with youth without FFP (Lucenko et al., 2011), and showed 48% less re-arrests and 33% higher employment rates in the FFP group. More recently, FFP has demonstrated a positive economic benefit to cost ratio as well (Washington State Institute for Public Policy and the University of Washington Evidence-Based Practice Institute, 2013), saving \$10,168 per youth in the program. When compared to out-of-home care, the FFP model showed a 16% reduction in juvenile justice costs (Rist, 2011). In Washington state, when FFP is applied with high fidelity, it is regarded as an evidence-based practice. One study in the Netherlands compared FFP to traditional Dutch parole services (Tong Sang, De Wit, De Boer, & Jongman, 2012) and showed that youth in the FFP group had a recidivism rate of 40% and the control group 49%.

Next to the geographical expansion, the FFT and FFP models extended their target population. The FFT program was first applied in a United States child protection population during the 80s (Barton, Alexander, Waldron, Turner, & Warburton, 1985). Compared to care as usual, children in the FFT condition were less frequently placed out of home and less services were needed. FFT has also been applied in an ethnically diverse population of youth in child welfare in Norway (Thorgersen, 2012).

It is only recently that the FFP model has expanded outside the juvenile justice setting, such as child protection and child welfare services. One adaptation of FFT is Functional Family Therapy-Child Welfare (FFT-CW; Alexander et al., 2013), which is applied in New York City, including a Low Risk track and a High Risk track. The Low Risk track is a case management approach, comparable to FFP. It consists of the same three phases as FFP and professionals act as case managers.

Adaptations involved integrating a developmental focus into the model to meet the needs of children and youth across the entire age range of 0 to 18 years. As such, the primary focus of FFP expanded from problems of individual juveniles to the mental health, substance abuse and behavioral needs of all family members. Preliminary findings of a pilot of 55 families showed that the care of 59% of the families in the Low Risk track were completed within a year and that out-of-home placement was not necessary, which was considered a success for these child welfare cases (Robbins & Rowland, 2012). Another adaptation of FFP started in 2011, as FFP was customized for intensive casework with complex multi-problem families in the Netherlands (Busschers, Boendermaker, & Dinkgreve, 2016). Because of the adaptation of FFP to a different geographical and lingual situation and to a broader target population of FFP, closer examination of this method and its application is needed.

### **Risk, Need, & Responsivity (RNR) model**

FFP is based on the principles of Risk, Need and Responsivity, known as the RNR model of Andrews & Bonta (2010). Meta-analyses on criminal offense recidivism reduction show that interventions, applied in juvenile justice settings, are most effective when based on these principles (Andrews & Bonta, 2006). For several reasons it can be assumed that these principles will also produce positive outcomes for children in child welfare and child protection services.

#### *Risk principle*

The Risk principle states that the level of intensity of the intervention should match a juvenile's risk of re-offense. When the intensity does not match the risk level, an intervention can produce counter effective results (Lösel, 1993; Lowenkamp & Latessa, 2005). The risk level of both delinquency (Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikström, 2002; Van der Laan & Blom, 2006) and child maltreatment (Belsky 1980, 1984; Cincchitti & Carlson, 1989; Cincchitti & Rizley, 1981) is determined by the balance between risk and protective factors. Exposure of children to multiple risk factors predicts more severe developmental consequences than singular risk factor exposure (Evans, Li, & Whipple, 2013). This accumulation of risks in multiple domains increases the risk for delinquency (Rutter, Tizard, & Whitmore, 1970; Van der Laan & Blom, 2006) as well as child maltreatment (Brown, Cohen, Johnson, & Salzinger, 1998; MacKenzie, Kotch, & Lee, 2011). Therefore, in FFP the professional works by the 'high risk, high intensity' principle and one of the key competencies is to be relentless in working with the families.

#### *Need principle*

The Need principle states the importance of focusing on those risk factors that are dynamic and directly linked to undesired outcomes (Andrews & Bonta, 2010),

which may be criminal offense recidivism in the case of criminal law or child maltreatment in the case of civil law. Only interventions or services aimed at changing these dynamic risk factors that are related to these undesired outcomes can reduce the actual risk for recurrence of delinquency or child abuse and neglect. Both delinquency (Loeber, Slot, & Stouthamer-Loeber, 2008) and child maltreatment (Belsky (1993) can be explained from the bio-ecological model of Bronfenbrenner (1979), addressing that severe behavior problems and problems in the upbringing of children are caused by a multitude of factors that operate via transactional processes at different levels. This defines the domain of potential risk factors that the intervention needs to focus on. There is an overlap in risk and protective factors for delinquency and child maltreatment (Asscher, Van der Put, & Stams, 2015; Wenar & Kerig, 2005). In FFP, the professional and the family create a Supervision Plan that matches the needs of the family.

### *Responsivity principle*

The third principle of the RNR model addresses Responsivity. This principle states the importance of matching the intervention to the motivation, learning style and cognitive functioning of the youth (Andrews et al., 1990; Lowenkamp & Latessa, 2005). Responsivity addresses the importance of the actual application of the intervention to the child or youth (Andrews & Bonta, 2010). For reducing criminal offense recidivism and child maltreatment, children need to be linked to appropriate services based on their individual psychological and social needs. The FFP professional uses cognitive behavior therapy skills to strengthen the motivation of the child and family and to identify the causes for the specific problems and situation. Additionally, one of the key components of FFP is matching with the child and family.

FFP is a relational approach that matches interventions to the relational patterns of families. With delinquent or substance-abusing adolescents, this often involves accommodating families in which youth have considerable power to engage and motivate family members into the treatment process. This relational focus and assessment of relations within the family is one of the unique components of FFP. Only when working with the whole system at the same time, the case manager can examine and understand the underlying relations and behavior patterns in the family. The relations and patterns are used to formulate goals and give the case manager and the family insight in the family's functioning. The relational approach helps find the right interventions to target the causes of the problems in the family (Alexander et al., 2013). FFP impacts youth and families through a family focus. The family (system) is considered an important learning environment for children. Within this system, relationships between family members are given meaning, and strategies are learned to cope with different sorts of relationships and behavior patterns. Later, as children grow older, more adaptive behavior patterns are applied in other contexts as well, such as at school and with peers (Sexton et al., 2003). Another component of FFP is the use of cognitive behavioral treatment

techniques (Alexander et al., 2013). These techniques are derived from FFT and aim to reduce negativity and build hope. They are of great importance to create a working relationship with all family members and motivate them for change.

### *Program fidelity*

Research on programs that reduce juvenile recidivism show that the higher the level of program fidelity the better the outcomes, in both research and community settings (Lipsey, 2009; Tennyson, 2009). Studies on FFT (Sexton & Turner, 2010) and FFP (Rowland, 2009) support this positive link between fidelity and outcomes. Program fidelity (also known as treatment integrity) refers to the degree to which the intervention is implemented as intended (Perepletchikova & Kazdin, 2005). Program fidelity is often divided into three components: program adherence, program competence and program differentiation (Perepletchikova & Kazdin, 2005). Program adherence refers to the extent to which the elements of the program are applied as intended. Program competence refers to level of skills and the degree of responsiveness of the professional when delivering the program. Program differentiation is defined as the extent to which the programs under study differs along appropriate lines defined by the program manual (Perepletchikova & Kazdin, 2005).

Program fidelity can be established and maintained by offering professionals frequent and targeted support (Mikolajczak, Stals, Fleuren, Wilde, & Paulussen, 2009; Schoenwald, Chapman, Sheidow, & Carter, 2009). That is why FFP contains an intensive support system to provide professionals the knowledge and skills to apply the FFP program with high levels of program fidelity. The FFP support system includes weekly team meetings to reflect on and improve program fidelity to the RNR principles as operationalized in FFP. Case notes, audio, and video material are used for observation based supervision. The FFP supervisor uses weekly and quarterly measures to monitor levels of program fidelity of each team member. The quarterly monitoring instrument is called the Functional Family Parole Global Rating Measure (FFP-GRM; Alexander, Kopp, & Sexton, 2002 as cited in Rowland, 2009). Based on a similar FFT instrument, FFP-GRM was created by the model developers to help monitor professional's adherence to the FFP model. This information is used to provide feedback on the prescribed components and skills of the model (Rowland, 2009).

Measures of program fidelity are a key component for research on the implementation of youth mental health services (McLeod, Southam-Gerow, Tully, Rodríguez, & Smith, 2013). At the same time, these measures are necessary for effectiveness studies. To draw conclusions from data and confidently generalize findings, instruments for program fidelity must consistently measure what they are intended to measure. Only strong psychometric properties can affirm this. In other words, the instruments need to be reliable and valid (Cook & Beckman, 2006; Martinez, Lewis, & Weiner, 2014). Although the need for reliability and validity is widely acknowledged, the psychometric quality of instruments is often not



reported or examined in studies in implementation research (Martinez et al., 2014). Studies using instruments without sound psychometric properties should be interpreted with caution, as it is not clear whether the program fidelity information is valid and reliable. As Martinez, Lewis, and Weiner (2014, p. 3) clearly state: “the quality of the study depends on the quality of the instrumentation”.

Many program fidelity instruments used in effectiveness studies lack data on reliability and validity (Schoenwald & Garland, 2013). However, examples exist of psychometrically sound measures of program fidelity. For example, supervisors of Multisystemic Therapy (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009) use the Therapist Adherence Measure (TAM, Schoenwald, Henggeler, Brondino, & Rowland, 2000) and the supervisors of Parent Management Training Oregon (PMTO; Forgatch & Patterson, 2010) use the Fidelity of Implementation Measure (FIMP; Knutson, Forgatch, Rains, & Sigmarsdóttir, 2009). Previous studies reporting FFP-GRM data are scarce and limited to a juvenile parole setting. The study of Rowland (2009) reports the correlation between the scales and information on the differences in fidelity scores when using multiple groups of raters (supervisors and experts).

### *Aim and objective*

With the growing focus on (intensive) case management as a model for working with complex cases in child protection, engaging the family is essential. The FFP model demonstrates how case managers can engage and work with families and children at risk for child abuse and neglect, without delivering treatment themselves. To evaluate FFP practices, program fidelity information is needed. Program fidelity of FFP can be measured by the FFP-GRM. However, data on reliability and validity of the FFP-GRM are scarce. At the same time, the application of the FFP model and its support system is expanding. Therefore, the aim of this study was to examine the validity and reliability of the program fidelity instrument of FFP (the FFP-GRM) using Confirmatory Factor Analysis (CFA). This is the first study conducting CFA on the FFP-GRM.

We assumed that the items of the FFP-GRM would be uniquely related to (i.e., load on) the four categories of the FFP-GRM: ‘FFP phase 1’, ‘FFP phase 2’, ‘FFP phase 3’, and ‘Overall FFP competencies’. Additionally, we assumed that each of the four factors would be part of (i.e., load on) the higher order factor of ‘FFP program fidelity’.

## **Method**

### *Participants*

Program fidelity scores ( $N = 380$ ) were collected from 207 distinct FFP professionals, between August 2012 and February 2015. Professionals were mainly female ( $n = 182$ , 88%). All professionals completed at least vocational education at



bachelor level in social work and were trained in the FFP model. For each of the professionals the FFP-GRM's were scored twice on average (min. 1, max. 6).

Program fidelity ratings were scored by 37 FFP supervisors. These supervisors were all trained in the FFP model and completed FFP supervisor training. All supervisors work as FFP case managers in families themselves. Most supervisors were female ( $n = 32$ , 86%). All supervisors completed at least vocational education at bachelor level in social work. Supervisors used the GRM-FFP on average 10 times (min. 1, max. 26).

### *The instrument*

The GRM-FFP consists of 34 items scored on a four-point Likert scale for each item (Alexander et al., 2002). Participants respond to all items on a 1–4 scale, where 1 is 'not adherent, the case manager uses the FFP model 0–25%' and 4 is 'highly adherent, the case manager uses the FFP model 75–100%'.

The GRM-FFP is divided into five sections (Rowland, 2009). The first three sections ask the assessor to rate the adherence to the fundamental goals and skills of each of the three phases of FFP. Phase 1 is Engage and motivate (nine items, e.g. "Is the case manager successful at changing the focus to "something between people?"), phase 2 is Support and monitor (five items, e.g. "Does the case manager implement a family based service plan?") and phase 3 is Generalization (four items, e.g. "Does the case manager focus on relapse prevention to maintain changes?"). The fourth section asks about the general skills in implementing the FFP model (15 items, e.g. "Does the case manager maintain a balanced alliance with all family members throughout all Phases?"). The fifth section asks the assessor to give an overall rating of the professionals' adherence to the model (1 item; "Does the case manager consistently adhere to the FFP model in overall practice?"). The fifth section is excluded from analysis, as it is theoretically assumed to be an overall score of program fidelity instead of a factor loading to the higher-order factor 'FFP Program Fidelity'. In total 33 items are included in analysis.

In this study, the Dutch version of the FFP-GRM was examined. The instrument has been translated into Dutch and was used for the purposes of implementation of FFP in the Dutch setting of casework with high risk, multi-problem families in a youth parole, child welfare and child protection setting. Therefore, the term 'youth' was replaced by 'children'. Translation of the instrument took place in collaboration with the CEO of the FFT and FFP program, who is a native English speaker.

### *Statistical analyses*

Statistical analyses were performed using the Mplus software (Muthén & Muthén, 2012), a software package often used for CFA.

*Missing data.* There were 142 missing values, most of them ( $n = 82$ ) pertained to the ‘Generalization’ phase. Missing data were estimated using expectation maximization in SPSS. This technique overcomes some of the limitations of other techniques, such as regression substitution or mean substitution. These alternative techniques can generate biased estimates and, specifically, underestimate the standard errors (Schafer & Olsen, 1998).

*CFA and Fit Indices.* CFA validates the extent to which the statistical model fits the actual data (Hoyle, 2008; Waltz, Strickland, & Lenz, 2012). In this study, CFA was applied to define the associations between the four factors of the FFP-GRM and the higher-order factor ‘FFP Program Fidelity’. To increase model fit, single items were allowed to correlate on theoretical grounds.

The four-factor model derived by CFA is shown in Figure 1. The validity of the model was evaluated by five models of fit, from two different classes of fit indices. Three models from discrepancy functions were used: the Chi-Square Test of Model Fit, the Relative Chi-Square test, and the Root Mean Square Error of Approximation (RMSEA). Two models we used that compare the target model with the null model; the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI).

*Chi-Square test.* The Chi-Square test of model fit tests the null hypothesis that there is no difference between the patterns observed in these data and the model specified. Acceptable model fit is indicated by a Chi-Square value greater than 0.05.

*Relative Chi-Square test.* The Relative Chi-Square test of model fit tests the null hypothesis that there is no difference between the observed patterns and the model. This value equals the chi-square index divided by the degrees of freedom. This index might be less sensitive to sample size than the Chi-Square test. Acceptable model fit is indicated by a value ranging from less than 2 (Ullman, 2001) to less than 5 (Schumacker & Lomax, 2004).

*Root mean square error of approximation.* The RSMEA tests the discrepancy between the hypothesized model, with optimally chosen parameter estimates, and the population covariance matrix. The RMSEA ranges from 0 to 1, with smaller values indicating better model fit. Acceptable model fit is indicated by an RMSEA value of 0.06 or less (Hu & Bentler, 1999).

*Comparative Fit Index.* CFI indicates how much better a model fits the data compared to a baseline model where all variables are uncorrelated. The CFI is equal to the discrepancy function adjusted for sample size (Bentler, 1992). CFI ranges from 0 to 1 with a larger value indicating better model fit. Acceptable model fit is indicated by a CFI value of 0.90 or greater (Hu & Bentler, 1999).

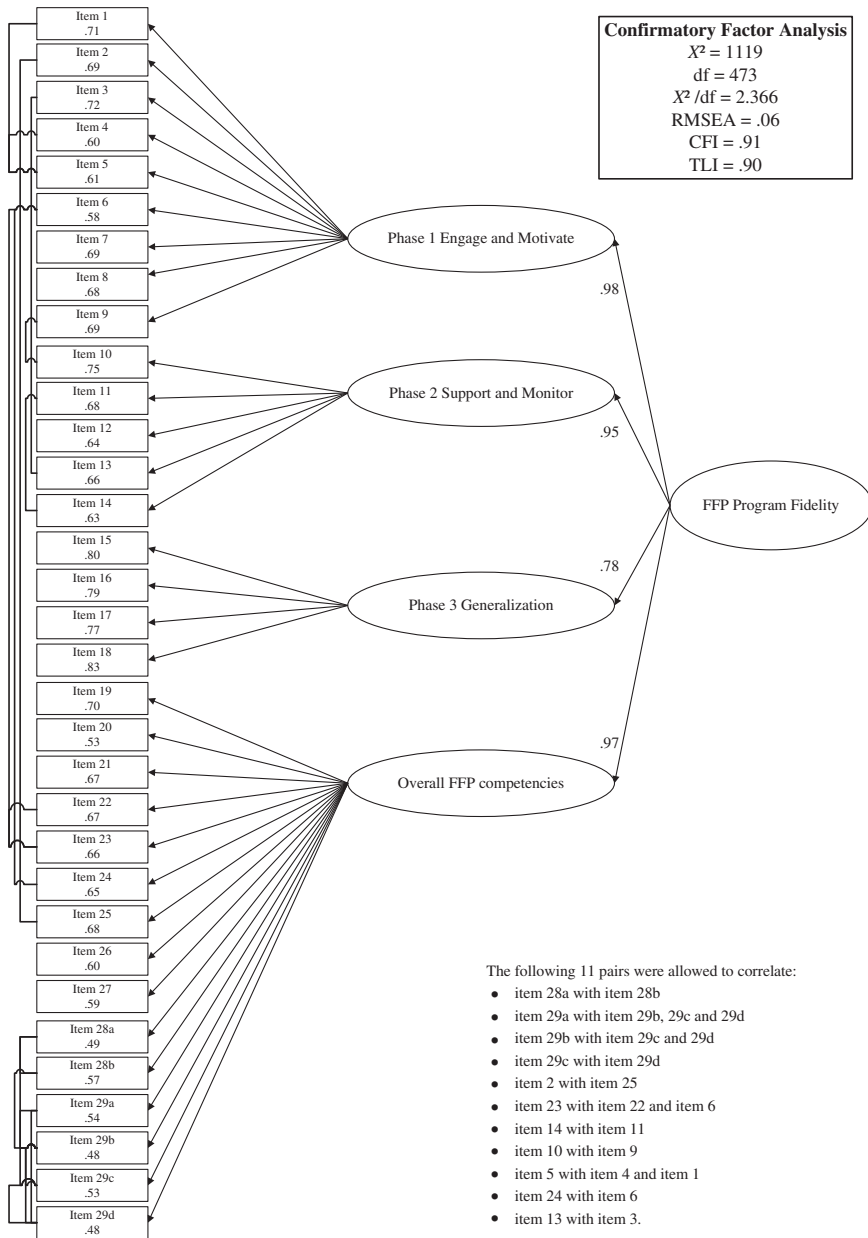


Figure I. Confirmatory factor analysis.

*Tucker Lewis Index.* The TLI indicates how much better the model fits the empirical data compared to a model without correlation. TLI values range from 0 to 1. For these indices values above .90 indicate reasonable fit and values above .95 indicated good model fit (Bentler, 1992; Hu & Bentler, 1999).

*Reliability.* The reliability index Cronbach's alpha ( $\alpha$ ) was computed for all four subsections of the FFP-GRM. We considered  $\alpha$  coefficients  $< .60$  as insufficient, from  $.60$  to  $.69$  as marginal, from  $.70$  to  $.79$  as acceptable, from  $.80$  to  $.89$  as good, and above  $.90$  as excellent (Cronbach, 1951).

## Results

### *Confirmatory factor analysis*

The model specified that the 33 items load on the four scales, as latent constructs and that these four constructs load to the higher-order factor 'FFP Program Fidelity'. Modification indices showed that allowing some items to correlate with each other improved model fit. CFA analysis revealed a strong relationship between the four factors and the higher-order factor, see Figure 1 and Table 2. The factor 'Engage and motivate' loads on the higher-order factor 'Program Fidelity FFP' by 0.978, the factor 'Support and monitor' loads by 0.954, the factor 'Generalization' by 0.780 and the factor 'Overall FFP competence' loads by 0.966.

In this study, we found  $X^2(473) = 1119; p < .001$  for the four factor model. Because of the high number of cases in this study, we also calculated the relative Chi-Square and found a value of 2.366. The RMSEA was 0.06, with a 90% confidence interval between 0.055 and 0.064. The CFI for the current data is 0.91, the TLI is 0.90. Thus, the model indicated a good fit according to three indices (relative Chi-square, RMSEA and CFI) and a reasonable fit according to one other index (TLI).

There were 11 pairs of items allowed to correlate in the final model (see Figure 1) because they addressed the same construct, model principle or skill. For example, item 6 '*Does the case manager respond relationally rather than diagnostically labeling the family?*' and item 24 '*Does the case manager communicate about the child in a relational/family focused way throughout all phases?*'. Both items address the use of a relational focus, one of the core principles of the FFP model.

### *Reliability*

Table 2 shows the Cronbach's  $\alpha$  for the four subsections of the FFP-GRM in the total sample, ranging from  $.82$  to  $.90$  and thereby indicating 'good' or 'excellent' internal validity. Inspection of the alpha-if-deleted output showed that deleting an item would not substantially be improved.

**Table 1.** Items and scales of FFP-GRM.

Item	Item content	Estimate	Scale
Item 1	How well are they able to reduce blaming and negativity?	0.71***	Engage and motivate
Item 2	Do they create a balanced alliance with all family members?	0.69***	Engage and motivate
Item 3	Are they successful at changing the focus to "something between people"?	0.72***	Engage and motivate
Item 4	Do they use 'change focus' techniques such as relational statements, strength based statements, interrupting and/or diverting, point processing, and sequencing?	0.60***	Engage and motivate
Item 5	Do they use 'change meaning' techniques such as reframes, theme hints and themes?	0.61***	Engage and motivate
Item 6	Do they respond relationally rather than diagnostically labeling the family?	0.58***	Engage and motivate
Item 7	Do they create hopefulness by focusing on how all members of the family can work together to successfully complete the case management?	0.69***	Engage and motivate
Item 8	As available, do they bring family members into meetings?	0.68***	Engage and motivate
Item 9	Do they create service plans that match to the family?	0.69***	Engage and motivate
Item 10	Do they implement a family based service plan?	0.75***	Support and monitor
Item 11	Do they maintain family involvement throughout the Support and Monitor phase?	0.68***	Support and monitor
Item 12	Do they work to eliminate barriers to services?	0.64***	Support and monitor
Item 13	Do they support skills learned in residence in a family focused way?	0.66***	Support and monitor
Item 14	Do they monitor the services in which the family is involved?	0.63***	Support and monitor
Item 15	Do they focus on relapse prevention to maintain changes?	0.80***	Generalization
Item 16	Do they generalize changes to new situations faced by the family?	0.79***	Generalization
Item 17	Do they incorporate community resources that might support the changes already made by the family?	0.77***	Generalization

(continued)

**Table 1.** Continued.

Item	Item content	Estimate	Scale
Item 18	Do they provide support by maintaining continuity with change plans rather than introducing new solutions?	0.83***	Generalization
Item 19	Do they deliver the three FFP phases in the appropriate order?	0.70***	Overall FFP competencies
Item 20	Are they flexible in providing services in a way that meets the family's schedule?	0.53***	Overall FFP competencies
Item 21	Do they utilize the FFP model principles as their primary source of decision making?	0.67***	Overall FFP competencies
Item 22	Do they understand relational functions?	0.67***	Overall FFP competencies
Item 23	Do they effectively apply their understanding of relational functions?	0.66***	Overall FFP competencies
Item 24	Do they communicate about the adolescent in a relational/family focused way throughout all phases?	0.65***	Overall FFP competencies
Item 25	Do they maintain a balanced alliance with all family members throughout all phases?	0.68***	Overall FFP competencies
Item 26	Do they work with the family relentlessly?	0.60***	Overall FFP competencies
Item 27	Do they apply suggestions and feedback?	0.59***	Overall FFP competencies
Item 28a	Do they demonstrate consistent therapeutic focus as evidenced by appearing:	0.49***	Overall FFP competencies
Item 28b	(a) Non-judgmental (b) Non-blaming	0.57***	Overall FFP competencies
Item 29a	Do they demonstrate general relational/counseling skills such as:	0.54***	Overall FFP competencies
Item 29b	(a) Humor (b) Acceptance	0.48***	Overall FFP competencies
Item 29c	(c) Sensitivity	0.53***	Overall FFP competencies
Item 29d	(d) Warmth	0.48***	Overall FFP competencies

FFP-GRM: Functional Family Parole services Global Rating Measure.

\*\*\* $p < .001$ .

**Table 2.** Reliability indices for FFP-GRM.

Subsection	No. of items	Cronbach's $\alpha$	
Engage and motivate	9	.88	Good
Support and monitor	5	.82	Good
Generalization	4	.87	Good
Overall FFP competencies	15	.90	Excellent

FFP-GRM: Functional Family Parole services Global Rating Measure.

## Discussion

The objective of this study was to examine the validity and reliability of the GRM-FFP instrument by means of Confirmative Factor Analysis and reliability analysis. We found that the four-factor model of the GRM-FFP has a good fit to the data. Additionally, internal consistency of the four subscales was determined. All scales did have a high internal consistency. The results support the psychometric soundness of this measure, and thus show that the GRM-FFP is a valid instrument for measuring program fidelity of the case management model FFP. Therefore, the decision was made to preserve the instrument in its original shape.

For organizations working with the FFP program this means that the GRM-FFP can be used to measure program fidelity and use it to support professionals with feedback on the application of the model. Measurement tools like this and feedback on program fidelity are key ingredients of effective support to establish and maintain program fidelity (Goense, Boendermaker, & van Yperen, 2016), which is still very uncommon in child welfare and child protection settings (Boendermaker, Boomkens, & Boering, 2013). High levels of program fidelity are linked to positive outcomes for children, as shown in meta-analyses (Lipse, 2009; Tennyson, 2009) and more specific for FFT (Sexton & Alexander, 2003) and FFP studies (Rowland, 2009).

The present study's findings have implications for research purposes as well. As it turns out to be a valid instrument, the GRM-FFP should be used to investigate relations among specific components of FFP, participant characteristics and intervention outcomes in all clinical effectiveness trials. So far, only the study of Rowland (2009) used the FFP-GRM to examine program fidelity as a moderator. Valid instruments are needed to increase the likelihood of high quality data and thereby increase the likelihood of valid outcomes (Cook & Beckman, 2006; Martinez et al., 2014).

At Child and Youth Protection Amsterdam Area (CYPAA), FFP was customized for case management in an integrated juvenile parole, child welfare, and child protection setting. This study shows that the FFP-GRM can also be used in settings where adaptations are made to the target group of FFP.



## Limitations

Some limitations, however, have to be addressed. First, this study is solely based on data from one Dutch organization. Validation research in different settings is needed to confirm or contest the current results.

Second, according to Perepletchikova and Kazdin (2005), data on program fidelity should be collected by trained research staff or program experts, who rate program fidelity based on direct observations of the professionals' behavior. In this study, supervisors rated their own team members and were not blind raters. Also, both direct observations and supervision meetings were used to gain insight. This allows for potential rater bias. Data on inter-rater reliability was not obtained. On the other hand, the data in this study are derived from a clinical setting, which increases the ecological validity of the instrument. Thereby, implementation issues regarding the program fidelity instrument were mostly overcome.

Findings of this study are the first step in validity and reliability testing of the program fidelity instrument. From a statistical point of view, more validity tests are needed to strengthen the validity and reliability of the FFP-GRM, for example inter-rater reliability and predictive validity, as recommended by Martinez et al. (2014). Further, convergent validity of the items needs to be examined, with an observation-based design. Currently, inter-rater reliability tests are being prepared. Although this study did not include all validity tests, it contained a robust design to examine model fit. Four model fit indices from two different classes were used to test fit of the factor structure, as recommended by many researchers, such as Marsh and Hau (1996). Using different classes overcomes the limitations of each index (Jaccard & Wan, 1996).

## Conclusions

The results of this study are relevant to all sites using the FFP model and its support system. As the application of FFP is expanding, the use of FFP-GRM to monitor program fidelity of FFP is rapidly increasing as well. Thereby, the results of this study are relevant for clinical matters at all current and future sites working with the FFP model, as well as for sites that use an adapted version of the FFP model. Now that the FFP-GRM has shown to be a valid instrument, the sites with an adapted version of FFP can use the instrument as the core for an adapted program fidelity instrument.

More research on the FFP model and its program fidelity instrument is relevant in social work, as there is a growing focus on (intensive) case management as a model for working with complex child protection cases. Further, the current study is useful in looking at methods for evaluating case management practices with various at risk populations.

## Ethics

Taking into consideration the non-medical and non-invasive nature of this study, formal approval of a medical ethical committee was not required according to the Dutch law.

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## Note

1. For more information about FFT and FFP see the website of FFT LLC: <http://www.fftlc.com>.

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