FAMILY PROCESS

Improving Experience in Personal Social Systems through Family Constellation Seminars: Results of a Randomized Controlled Trial

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*This study examined the efficacy of family constellation seminars (FCSs) on individuals' experience in their personal social systems, especially the experience of belonging, autonomy, accord, and confidence. We conducted a single-blind, stratified and balanced, randomized controlled trial. Participants were 208 adults (*M = *48 years,* SD = *10, 79% women) who were randomly allocated either to the intervention group (3-day FCSs; 64 active participants, 40 observing participants) or to the wait-list group (64 active participants, 40 observing participants). Change was measured short-term (2-week and 4-month follow-up) using the Experience In Social Systems Questionnaire, personal domain (EXIS.-pers). EXIS.pers is a new outcome measure being applied for the first time in evaluation research. In addition, we used interpersonal scales derived from established measures (Outcome Questionnaire, OQ-45; Tool for the Evaluation of the Psychotherapeutic Progress, FEP). The average person in the intervention group showed improved experience in personal social systems, as compared with approximately 73% of the wait-list group after 2 weeks (total score: Cohen's* d = *.61,* p = *.000) and 69% of the wait-list group after 4 months (total score:* d = *.53,* p = *.000). The results were confirmed in per-protocol analyses (*n = *191) by the results of the EXIS.pers dimensions (Belonging, Autonomy, Accord, and Confidence) and the interpersonal scales derived from the OQ-45 and FEP. No adverse events were reported. This RCT provides first evidence that FCSs tend to positively influence participants' experience in their social systems.*

Keywords: Outcome Research; Family Constellations; Experience in Social Systems; Interpersonal Relationships

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The diversification of family therapy has created interesting new settings for counseling and psychotherapy (Nichols & Schwartz, 2004). One fascinating and controver-

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sially discussed innovation is the "family constellation," a subtype of "systems constellations." Among German family therapists understanding, which may differ somewhat from the Anglo-Saxon, the family is considered a specific subtype of a social system (von Schlippe & Schweitzer, 2012, pp. 129–130). Hence, family therapy is seen as a specific type of systemic therapy, and family constellations as a specific type of systems constellations (Cohen, 2006). Systems constellations may address diverse issues, like family conflicts and relational issues arising out of health symptoms, or organizational conflicts and relational issues stemming from work productivity (Eidmann, 2001; Schneider, 2009; Sparrer & Varga von Kibéd, 2002; Weber, 2002, 2005).

The goal of a family constellation, in particular, is to help the client gain insights into, understand, and, finally, change his or her inner image of a conflictive experience within the family system, for example, a dysfunctional relationship with a partner or parent(s). This is typically administered in a group setting in which approximately 25 unrelated participants meet for a one-time, 3-day, facilitator-led intervention called a "family constellation seminar" (FCS). FCSs do not work with whole families, and they are not multifamily groups. They can be considered an individual-focused, short-term group therapy intervention. They do not represent a comprehensive treatment program (Sexton et al., 2011).

In the practice of each FCS, 15 people engage as active participants to address some relational conflict of their own. Stand-ins for an individual's real family members can be chosen either from the other active participants or from the 10 observing participants who do not present their own issues for a constellation (Weber, Schmidt, & Simon, 2005). Each FCS starts with an introduction to the approach and an initial round to collect the active participants' goals. Every seminar day starts and ends with sharing rounds that allow all participants to briefly communicate the experiences they had. Over the course of the 3 days, 15 constellations are performed, one per active participant. Each constellation starts with a brief interview between the facilitator and the active participant to clarify the individual's goal. This is followed by a joint decision about which members play an important role in the active participant's system and thus should be represented in the constellation. Stand-ins for these absent family members, as well as someone to represent the active participant, are selected and positioned in the room, with spatial distances, angles, and body postures meant to correspond to the client's inner image of the family system in question ("problem constellation"). Next, the representatives are asked about the sensations, feelings, and thoughts they had while in their positions. Rearrangements and spatial adjustments are made until a constellation is found that offers a resolution for the active participant's issue ("solution constellation").

The family constellations approach has attracted professionals and laypersons, enjoying rapid dissemination in various fields of therapy and counseling. Between 1995 and 2005, ideological controversies about the philosophy and practice of FCSs split German family therapists into opposing groups of "fascinated followers" and "appalled opponents." Today, this controversy is largely reconciled (Weber et al., 2005).

BACKGROUND ON FAMILY CONSTELLATIONS

Bert Hellinger, a German missionary in South Africa who later became a therapist, introduced the family constellations approach in the 1980s and 1990s (Weber, 1993). In his writings, Hellinger rarely makes reference to theories or constructs from academic psychology. Rather, he mentions philosophical and religious ideas about "orders of appropriate relationships" (Hellinger, 1994) in multigenerational clans; his concepts are founded in Christian, Daoistic, and Confucian traditions. Hellinger's lack of scientific

theorizing has prompted his followers, opponents, and observers to formulate basic assumptions that they perceive as underlying this method.

Orders of Appropriate Relationships

Weber (1993) and Sparrer and Varga von Kibéd (2008) formulate basic assumptions which, according to Hellinger, stimulate an "appropriate order" in human systems. For example, one must acknowledge the status of a system before introducing something new into it, one must acknowledge a person's right to belong when he is part of a system by birth or by contract, one must acknowledge that older members precede younger members, and one must recognize members with high achievements contributing to the well-being of the system. These principles are all concerned with the proper distribution of duties, obligations, and privileges within the system. von Sydow (2007) considers contextual family therapy to have influenced Hellinger's thinking, although he did not reference this approach. Contextual family therapy integrates individual and systemic approaches in therapy (Boszormenyi-Nagy & Krasner, 1986) and tries to foster change by attending to the multigenerational transmission of family dynamics (see Gangamma, Bartle-Haring, & Glebova, 2012). It looks at the interhuman experience from within the social system ("I-within-my-systems"), which is a central perspective in the systems constellations approach (Sparrer & Varga von Kibéd, 2008). The focus is on relational ethics, a balanced give-and-take ("fairness") influenced by the experience of trustworthiness, loyalty, entitlement, and indebtedness (Gangamma et al., 2012). Hargrave and Pfitzer (2003) define *trust* as the feeling of confidence in interactions that is the "primary relational resource from which we learn how to interact" as cited by Gangamma et al. (2012, p. 826). *Loyalty* is associated with accord with oneself and others. *Entitlement* refers to being cared for, including the right to belong to the family. *Indebtedness* is a kind of relational autonomy in which one can negotiate rights and responsibilities within the family (Boszormenyi-Nagy & Krasner, 1986; Gangamma et al., 2012). There are few methodologically sound studies on relational ethics. One study used relational ethics as a predictor of marital satisfaction, showing marital satisfaction acted as a mediator between relational ethics and depression (Grames, Miller, Robinson, Higgins, & Hinton, 2008).

Intervention Technique Derived from Psychodrama and Family Sculpture

Family constellations integrate elements from psychodrama (Moreno, 1946) and family sculpture (Duhl, Kantor, & Duhl, 1973; Satir, Bitter, & Krestensen, 1988) as spontaneous dramatizations of intra- and interpersonal processes, although again Hellinger did not cite these authors or concepts. Family constellations spatially visualize family dynamics. The experience of proceeding from an initial "problem constellation" to a closing "solution constellation" is intended to foster change in the participants' relational experience (Weber et al., 2005).

Individual and Systemic Change Stimulated by Family Constellations

Our understanding of the dynamics of family constellations is that they stimulate individual and systemic change in the following ways: making visible the spatial arrangement of relationships within a conflictual system ("externalization"); providing access to the insights of unrelated third parties regarding the sensations, feelings, and thoughts they experienced while representing absent family members within the constellation; and making observable (from the outside) and "experienceable" (from within) the transformation of a "problem constellation" into a less burdensome "solution constellation." The latter provides a new framework for feeling, thinking, and behaving that challenges "the coherence

of the reflexive circle between beliefs and actions" (Fruggeri, 1992, as cited in Becvar & Becvar, 2009, p. 295). Experiences of trust, entitlement, appropriate loyalty, and appropriate indebtedness (Boszormenyi-Nagy & Krasner, 1986; Gangamma et al., 2012) or of confidence, belonging, accord, and autonomy (Sparrer & Varga von Kibéd, 2008) can arise during family constellations. In our understanding, family constellations first and foremost directly change an individual's inner stance on important family members. This may help modify one's contribution to the interactional cycles within this family system, which, in turn, may contribute to change within the entire system.

EMPIRICAL STUDIES ON FAMILY CONSTELLATIONS

In our review of the literature[1], we found that, of the more than 100 publications that point to the international significance of FCSs, most originate from counseling and psychotherapy. No design contributed to an evaluation of family constellations as an evidence-based intervention, if one adheres to the classification of treatments proposed by Sexton et al. (2011). We thus designed a randomized controlled trial, which demonstrated improvement of psychological functioning and goal attainment 2 weeks and 4 months after FCSs (Bornhäuser et al., 2013; Weinhold et al., 2013), and of which this study is a part. A previous, quasi-experimental, controlled trial demonstrated improvement of physical and psychological health, self-esteem, and self-acceptance 4 months after a family constellation (Höppner, 2001). A pre–post study without controls showed increased emotional connectedness and relational autonomy 4 weeks and 4 months after a family constellation (Schumacher, 2000). Although ample case studies provide anecdotal evidence for the efficacy of family constellations systems (Sparrer & Varga von Kibéd, 2008), FCSs have not been investigated systematically.

EXPERIENCE IN SOCIAL SYSTEMS: A NEW OUTCOME MEASURE IN EVALUATION RESEARCH

This lack of research in family constellations may stem from the absence of a psychometrically sound instrument. Such an instrument would need to focus on dimensions central to the systems constellations approach. It should not only be open to addressing one's experience within the family system but also allow the individual to decide whom to consider as part of this personal social system. The evaluation of such an experience should start from within the social system ("I-within-my-systems"), which is the primary perspective in systems constellation approach (Sparrer & Varga von Kibéd, 2008). In contrast, interactional measures are typically limited to dyadic relationships ("you-me"; e.g., Busby & Gardner, 2008) or whole families ("we-as-a-whole"; e.g., Green, Harris, Forte, & Robinson, 1991). We developed the Experience In Social Systems Questionnaire (EXIS; Hunger, Bornhäuser, Link, Voss, et al., 2013; Hunger, Bornhäuser, Link, Weinhold, & Schweitzer, 2013) to assess individuals' experience within their social systems. The EXIS encompasses a personal domain (EXIS.pers; e.g., couples, families) and an organizational domain (EXIS.org; e.g., teams, organizational units). The domains can be used separately or in combination. Each domain builds on four dimensions: Belonging, Autonomy, Accord, and Confidence. The dimensions express constructs of clinical, differential, social, and organizational psychology (Hunger & Link, 2011) and are associated with aspects of relational ethics inherent to contextual family therapy (Boszormenyi-Nagy & Krasner, 1986). Of capital importance is that these dimensions are central to the systems constellation approach

[1]PsychINFO, PubMed, German Association for Systemic Therapy, Counseling and Family Therapy (DGSF), International Systemic Constellations Association (ISCA), in Hunger & Link, 2011.

and to basic assumptions of what systems constellations aim to change (Sparrer & Varga von Kibéd, 2008). *Belonging* is the operationalization of the experience of being part of a social system (Sparrer & Varga von Kibéd, 2008), of being respected and welcome (Boszormenyi-Nagy & Krasner, 1986), and of forming and maintaining significant interpersonal relationships (Baumeister & Leary, 1995; Gere & MacDonald, 2010). Belonging is essential for protecting the boundaries of the family system (Sparrer & Varga von Kibéd, 2008). *Autonomy* is the operationalization of standing up for one's own needs and being assertive within the social system (Sparrer & Varga von Kibéd, 2008). It is understanding that rights, responsibilities, appropriate indebtedness (Boszormenyi-Nagy & Krasner, 1986), closeness, and distance can be negotiated (Busby & Gardner, 2008; Christman, 2004; Stierlin, 1971). Autonomy is essential for the growth of the family system (Sparrer & Varga von Kibéd, 2008). *Accord* is the operationalization of the experience of one's social system "as it is," including the acceptance of positive and negative experiences (Sparrer & Varga von Kibéd, 2008), and it is associated with appropriate loyalties (Boszormenyi-Nagy & Krasner, 1986) and the experience of accepting emotions, cognitions, and behaviors "as they are" (Durm & Glaze, 2001; King & Wynne, 2004, for the later life cycle). *Confidence* is the operationalization of the experience that challenging situations within one's social system can be dealt with positively in the future (Sparrer, 2006; Weber, 2002); it is associated with interpersonal trust (Boszormenyi-Nagy & Krasner, 1986) and with trust in the future (Krampen & Hank, 2004). The emergence of Confidence as the fourth dimension originates from its nature as a general dimension of counseling and psychotherapy (Howard, Lueger, Maling, & Martinovich, 1993). The EXIS.pers was demonstrated to be psychometrically sound and reliable, and validity was established through correlations with interpersonal and psychotherapeutic constructs (Hunger, Bornhäuser, Link, Voss et al., 2013). Sensitivity to change post FCS was demonstrated as well (Hunger, Bornhäuser, Link, Weinhold et al., 2013). As mentioned above, similar to relational ethics, few methodologically sound studies exist on the impact that FCS exert on the experience of belonging, autonomy, accord, and confidence in personal social systems. As far as we know, there are no controlled studies on how these dimensions are associated with health variables when using the framework of the systems constellations approach (Sparrer & Varga von Kibéd, 2008). There is no evidence that feeling differently within one's family after a FCS makes people healthier. There are, however, publications from academic psychology that demonstrate predictability regarding relationship satisfaction and psychological and physical health associated with the experience of belonging, autonomy, accord, and confidence (e.g., Bögels & van Melick, 2004; Howard et al., 1993; Stierlin & Weber, 1989; Uemura, 2007).

AIM

The aim of this part of the larger randomized, controlled trial (Schweitzer, Bornhäuser, Hunger, & Weinhold, 2012) was to investigate the absolute efficacy (see Sexton et al., 2011) of FCSs regarding individuals' experience in their personal social systems, thereby evaluating FCSs on dimensions that are central to the systems constellations approach. Because FCSs are commonly conducted outside the formal healthcare system, recruitment did not require the participants to be diagnosed clinically or to be in treatment; however, participants were allowed to be in counseling and/or psychotherapy. We focused on individuals' experience in their personal social systems. Improvement of psychological functioning and attainment of FCS-related goals were demonstrated at short-term intervals, 2 weeks and 4 months after the FCSs (Bornhäuser et al., 2013; Weinhold et al., 2013). We expected positive effects over time regarding the intervention group participants' experience in their personal social systems in general and specifically in regard

to belonging, autonomy, accord, and confidence. We did not expect these effects in the wait-list group. Because the outcome measure we used in this study was being applied for the first time in evaluation research, we included interpersonal scales derived from established measures. We also anticipated positive effects over time pertaining to the participants' interpersonal relationships, again specifically in the intervention group but not in the wait-list group. We expected to see effects on all measures at 2 weeks and 4 months after FCSs. Finally, we assessed potential harms by means of passive surveillance.

METHODS

This study is part of a larger single-blind, stratified and balanced, randomized controlled trial on the efficacy of FCSs (Schweitzer et al., 2012). All components of this study were conducted at the University Hospital Heidelberg, Germany. All participants were informed about the intervention procedure and the nature of the study, and they gave their written, informed consent to participate in the study.

Sample Characteristics

Inclusion criteria required: (a) the active participants to sign up for a family constellation of their own, that is, they were required to present with a serious conflictual social systems dynamic they wanted to work with; (b) the observing participants to have an interest in participating in a FCS but as representatives only; (c) all participants to participate in no further FCS until completion of this study; (d) all participants to have a minimum age of 18 years. Participants were recruited by means of an information flyer and a website (www.aufstellungsforschung.de) linked to several institutes and associations of systemic counseling and psychotherapy. To assess whether participants met the primary inclusion criteria, we conducted telephone interviews.

Study Design

Randomization

To obtain balanced sample sizes (26 participants in each FCS, consisting of 16 active and 10 observing participants), randomization was restricted using the random allocation rule, implemented according to the restricted shuffled approach (Schulz & Grimes, 2002). Randomization was stratified by participant status (active or observing participant), and it referred to conditions (intervention or wait-list group) and the two facilitators conducting the FCSs. The wait-list group received the same intervention after we closed this study. No further blinding was used (see Figure 1).

Eight FCSs (128 active and 80 observing participants) were conducted: four of them in the intervention group (64 active and 40 observing participants) and four in the wait-list group (64 active and 40 observing participants). We had two facilitators: one conducted the first and second FCS, the other the third and fourth FCS, in the intervention group; one conducted the fifth and sixth FCS, the other the seventh and eighth FCS, in the wait-list group.

Assessment points

Participants were assessed three times (baseline, 2-week, and 4-month follow-ups) with self-reporting questionnaires. The intervention group completed the baseline on-site immediately prior to the FCSs. The wait-list group received and answered the questionnaire isochronally by mail. After the baseline assessment, each participant of the intervention group attended one FCS. Participants in the wait-list group did not attend

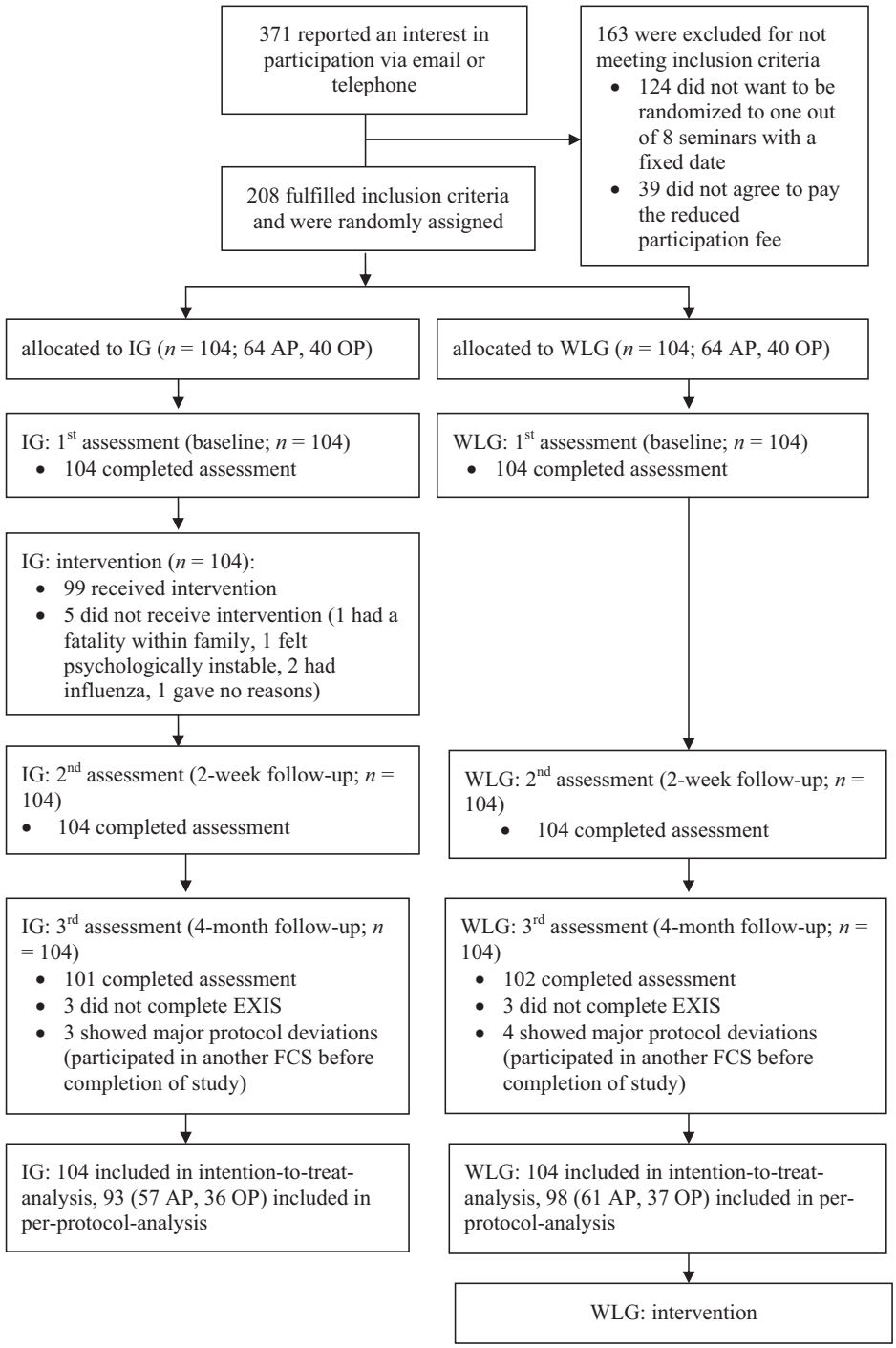

FIGURE 1. CONSORT-Flowchart.
Note. IG = intervention group; WLG = wait-list control group; AP = active participants; OP = observing participants; EXIS = Experience in Social Systems Questionnaire.

any FCS during the study period, but immediately subsequent to the 4-month follow-up (see Figure 1). At all follow-ups, participants received questionnaires and returned them by mail.

Assessment Instruments

Baseline information was gathered on demographic variables and previous experience with family constellations.

Experience in social systems

As the main outcome measure in this study, the participants' experience within their social systems was assessed using the total score on the Experience In Social Systems Questionnaire, personal domain (EXIS.pers) (Hunger, Bornhäuser, Link, Voss et al., 2013; Hunger, Bornhäuser, Link, Weinhold et al., 2013), consisting of 12 items (3 items*4 dimensions) rated from 1 (*not at all*) to 6 (*entirely*). Participants were asked to reflect on their experience over the previous 2 weeks. *Belonging* items indicate to what degree the respondent feels a sense of belonging and of being respected and welcome. *Autonomy* items uncover the respondents' experience in standing up for their own needs, as well as their willingness to erect and maintain boundaries with regard to others. *Accord* items identify how strongly the respondent feels satisfied and at peace with the way things are, as well as the degree of harmony with others. *Confidence* items probe whether the respondents are optimistic about having the strength to cope with upcoming challenges, how hopeful they are that things will continue positively, and the degree of confidence in their own ability to deal with things that cannot be changed.

Based on a sample of 634 adults (mainly midlife, highly educated, employed German women who were married or living with a partner), EXIS.pers demonstrated the best fit as a bi-level model including a general factor, "experience in personal social systems" (Cronbach's alpha: .91) and four dimensions: Belonging (Cronbach's alpha: .85), Autonomy (Cronbach's alpha: .74), Accord (Cronbach's alpha: .87), and Confidence (Cronbach's alpha: .83; Hunger, Bornhäuser, Link, Voss et al., 2013). Convergent validity was demonstrated by correlations with interpersonal relationships and psychotherapeutic constructs (Social Support Questionnaire by Fydrich, Sommer, & Brähler, 2007; Psychotherapeutic Outcome Questionnaire by Lambert et al., 2004; Tool for the Evaluation of the Psychotherapeutic Progress by Lutz et al., 2009). In comparison to the other EXIS.pers subscales, Belonging showed the highest association with social support (see Baumeister & Leary, 1995); whereas Confidence was most strongly associated with psychotherapeutic scales, especially in the phase of remoralization (see Howard et al., 1993).

EXIS.pers demonstrated 2-week and 4-month sensitivity to change after FCSs (n = 118; mainly midlife, highly educated, employed German women who were married or living with a partner). Norman's S_{repeat} was .92 at 2 weeks, for the total score (.78–.91, for the dimensions), and it was .85 at 4 months, for the total score (.71–.81, for the dimensions; Hunger, Bornhäuser, Link, Weinhold et al., 2013).

Interpersonal relationships

To validate outcome constructs, participants' interpersonal relationships were assessed using the "Interpersonal Problematic Relations" (IPR) scale derived from the *Outcome Questionnaire* (OQ-45; Lambert et al., 2004) and the "Interpersonal Problems" (IP) scale derived from the *Tool for the Evaluation of the Psychotherapeutic Progress* (FEP; Lutz et al., 2009). The IPR consists of 11 items rated from 0 (*never*) to 4 (*almost always*). Participants are asked to reflect on their satisfaction with and problems in interpersonal relations over the previous week. IPR was tested as reliable (Cronbach's alpha: .80;

Lambert, Hannöver, Nisslmüller, Richard, & Kordy, 2002), and sensitivity to change was demonstrated in clinical populations (Haug, Puschner, Lambert, & Kordy, 2004). The IP consists of 12 items rated from 1 (*never*) to 5 (*very often*). Participants are asked to reflect on their interpersonal problems over the previous week in accordance with the circumplex model (Horowitz, Rosenberg, Baer, Ureño, & Villasenor, 1988; Kiesler, 1996). IP was shown to be reliable (Cronbach's alpha: .80), and sensitivity to change was demonstrated in a clinical population (Lutz et al., 2009).

Standardization of FCSs

Each group of 26 participants met for a single 3-day FCS. As we are unaware of the existence of any handbook, either on the procedure of an FCS or on an individual family constellation, we developed a manual based on our observations in FCSs and interviews with pioneers of family constellations. All operationalizations were validated with the facilitators.

The manual requires the facilitator to incorporate into each FCS the following obligatory items: (a) welcome and information; (b) explanation of general philosophy and FCS procedures; (c) explanation of facilitator's working style; (d) instructions for representatives and how to communicate from that role; (e) instructions on how to position representatives in the room; (f) time for participant questions; and (g) an initial round to clarify active participants' goals. Furthermore, the third day should further include a sharing round to clarify participants' questions and concerns. Each day should also provide for a debriefing, at least one sharing round, two coffee breaks, and a lunch break on the second and third day.

The manual also requires each individual family constellation to cover the following obligatory points: (a) clarification of the individual participants' goals by means of a brief interview between the facilitator and the active participant whose turn it is; (b) decision-making on which part of the family will be set up, with the consent of the respective active participant; (c) selection and positioning of representatives in the room according to the active participant's inner image of the respective family conflict ("problem constellation"); (d) enquiry by the facilitator regarding each representative's observations (physical, emotional, mental state); and (e) rearrangement of representatives according to these observations, until a constellation is identified in which the representative of the active participant feels less burdened than in the beginning of the constellation ("solution constellation"). Optionally, the facilitator adds or removes representatives, asks representatives to speak ritual sentences vis-à-vis one or several of the other representatives, or asks representatives to perform ritual gestures. At the end, the active participant may step into the "solution constellation," taking their own position to experience the relational constellation that emerged from the process.

Intervention integrity and interrater reliability

Intervention integrity was maintained by two independent raters who were trained by observing FCSs before the onset of the study. They monitored each FCS and independently rated the occurrence of each obligatory standardized procedure. Overall intervention integrity was calculated as the percentage of obligatory procedures that were implemented as planned. Overall intervention integrity for the four FCSs ranged between 96.5% and 100%. Interrater reliability was determined as the percentage of agreement on intervention integrity between both raters. A more robust measure (e.g., Cohen's Kappa) could not be calculated due to the very low degree of total observer variance. Interrater reliability in the four FCSs ranged between 96.5% and 97.3%. Each family constellation averaged out at 46 minutes (SD = 10; range: 20–70 minutes).

Facilitator Effects

To ensure the quality of intervention and the competency to deal with potential study participants in the clinical range, eligibility criteria for the study facilitators were to (a) be either a licensed psychiatrist or psychotherapist; (b) have at least 20 years' professional experience; and (c) have at least 10 years' professional experience as a facilitator of family constellations. Our two facilitators were pioneers of family constellations: one a male licensed psychiatrist and psychotherapist who has conducted family constellations for 30 years, the other a female clinical psychologist and licensed psychotherapist who has conducted family constellations for 20 years. One-way univariate ANOVAs showed no differences between facilitators after 2 weeks and 4 months in the EXIS.pers total score, or the dimensional scores of Belonging, Autonomy, Accord, and Confidence. As there were only two facilitators, resulting in low power, the conclusion that each of them was equally effective is tentative. Potential therapist effects related to the EXIS.pers were not examined in this study.

Clustering Effects

FCSs were administered with individuals in a nonrecurring 3-day group setting; as such, there was interaction between active and observing participants over the course of the 3 days. Consequently, observations of individuals were not independent. We conducted a two-level (participant, FCS) linear regression analysis to account for positive intraclass correlations (ICC) indicating variance attributable to the FCS above and beyond the variance attributable to its participants (Kreft & de Leeuw, 1998; Murray, Varnell, & Blitstein, 2004). The ICC coefficient for the EXIS.pers total score was zero, indicating no intraclass correlations among participants of the same seminar. The same result was reported for the total score of the Outcome Questionnaire and the Tool for the Evaluation of the Psychotherapeutic Progress (Weinhold et al., 2013), from which we derived the interpersonal scales. Therefore, clustering effects were not expected and results from standard statistical analyses (mixed-design ANOVAs) will be presented.

Statistical Analyses

All analyses were calculated using the SPSS statistical package (Version 19.0, IBM Germany). All statistical tests were two-tailed. Single missing values for each (sub-)scale were replaced with the conditional mean values for the respective subgroup (active participants in the intervention group; active participants in the wait-list group; observing participants in the intervention group; observing participants in the wait-list group).

Intention-to-treat and per-protocol analyses

First, we conducted intention-to-treat analyses, which comprised a comparison of the intervention groups that included all participants as originally allocated after randomization to avoid bias (Shah, 2011). In our study, we included all 208 participants regardless of their adherence to the inclusion criteria, whether they participated in an FCS or not, or their subsequent withdrawal from the study due to protocol deviation, such as attending another FCS during the study period or failing to complete the main outcome instrument at the 4-month follow-up (see Fisher et al., 1990).

This was followed by per-protocol analysis for the main outcome measure. This entailed a comparison of the intervention groups encompassing only those participants who completed the intervention as originally allocated. Taken on its own, this analysis leads to bias (Shah, 2011); therefore, for the purposes of our study, we restricted analyses to only those participants who adhered to the inclusion criteria, who participated in the FCS to which

they were randomly assigned, and who did not deviate from the protocol (see Fisher et al., 1990).

Mixed-design ANOVAs

We performed mixed-design ANOVAs to identify differences between the intervention and wait-list group (Field, 2009). For these ANOVAs, the factors were as follows: group (intervention or wait-list), participant status (active or observing), and time (baseline, 2 weeks, 4 months). Contrasts A compared the baseline with the 2-week follow-up. Contrasts B indicated change between the 2-week and 4-month follow-ups.

We performed ancillary mixed-design ANOVAs to identify differences between active and observing participants in the intervention group (Field, 2009). For these ANOVAs, the factors were as follows: participant status (active or observing) and time (baseline, 2 weeks, 4 months).

Time × Group interaction effect sizes were assessed with partial eta-squared (η^2) for the mixed-design ANOVA. Classifications of effect sizes were as follows: $\eta^2 \geq .01$ small effect, $\eta^2 \geq .06$ medium effect, and $\eta^2 \geq .14$ large effect. Subsequently, for significant Time × Group interactions, simple effects analyses within and between groups were performed (Howell, 2002). Between-group effect sizes were assessed with η^2 and Cohen's d (Cohen, 1988). Classifications of Cohen's d were as follows: $d \geq .20$ small effect, $d \geq .50$ medium effect, and $d \geq .80$ large effect (Cohen, 1988). In accordance with Coe (2002), we interpreted Cohen's d in terms of percentiles. Within-group effect sizes were assessed with η^2.

RESULTS

Sample Characteristics and Participant Flow

The participant flow is shown in Figure 1. None of the 208 study participants dropped out; five participants in the intervention group (2.4%) did not participate in the FCS; three participants in the intervention group (1.4%) and four from the wait-list group (1.9%) committed major protocol deviations as they attended another FCS during the study period; another three participants in the intervention group (1.4%) and two from the wait-list group (1.0%) failed to complete the main outcome instrument at the 4-month follow-up. *Intention-to-treat* analyses involved 208 participants; *per-protocol* analyses were conducted for 191 participants (91.8%; 93 participants in the intervention group, 98 participants in the wait-list group). The participants were mainly midlife women, married or living with a partner, highly educated, employed, German, and with prior experience in family constellations. The two groups were well balanced with respect to the baseline (Table 1).

Intervention Outcome

Due to the nonsignificance of the three-way interaction, we analyzed only the Group × Time and the Time × Participant interactions using simple effects analyses. Results for the main and additional outcome measures are provided in Table 2.

Experience in social systems

For the EXIS.pers total score, mixed-design ANOVAs showed a statistically significant Group × Time interaction effect for the *intention-to-treat* analyses (n = 208) with a medium effect size. Between-group simple effects analyses demonstrated that participants in the intervention group had significantly improved their experience in their personal social systems compared with the wait-list group at short-term intervals of 2 weeks and 4 months after the FCSs, again with medium effect sizes. More precisely, the average

TABLE 1
Sample Characteristics

	Intervention group			Wait-list control group		
	Total sample (n = 104) M (SD)	**Active participants (n = 64) M (SD)**	**Observing participants (n = 40) M (SD)**	**Total sample (n = 104) M (SD)**	**Active participants (n = 64) M (SD)**	**Observing participants (n = 40) M (SD)**
Age (years)	47 (9)	47 (9)	48 (10)	48 (10)	48 (10)	49 (10)
Female	87 (84%)	51 (80%)	36 (90%)	77 (74%)	45 (70%)	32 (80%)
Married or living with a partner	69 (66%)	42 (66%)	27 (68%)	77 (74%)	46 (72%)	31 (78%)
High-school diploma	92 (89%)	57 (89%)	35 (88%)	89 (86%)	40 (78%)	39 (98%)
Employed	98 (96%)	59 (94%)	39 (98%)	94 (90%)	55 (86%)	39 (98%)
German nationality	101 (97%)	63 (98%)	38 (95%)	99 (95%)	61 (95%)	38 (95%)
Previous experience with FCS	83 (80%)	51 (80%)	32 (80%)	82 (79%)	54 (84%)	28 (70%)

Note. FCS = family constellation seminar.

person in the intervention group scored higher than approximately 73% of the wait-list group after 2 weeks (Cohen's d = .61) and higher than approximately 69% of the wait-list group after 4 months (Cohen's d = .53). Contrast A revealed significance in comparing the baseline to the 2-week follow-up, $F(1,204) = 34.37$, $p = .000$, $\eta^2 = .14$. Contrast B did not reveal significance but supported the stability of this large effect over the 4-month follow-up. Within-group simple effects analysis demonstrated that this effect was due to a significant change over time in the intervention group, $F(1.84,187.86) = 21.71$, $p = .000$, $\eta^2 = .18$, while participants in the wait-list group showed no significant change. *Per-protocol* analyses (n = 191) supported these results.

Additional analyses of the EXIS.pers dimensions mirrored these results. Group × Time interaction effects for the *intention-to-treat* analyses (n = 208) were significant with small effects. Between-group simple effects analyses demonstrated that participants in the intervention group had a significantly improved experience in belonging, autonomy, accord, and confidence in their personal social systems compared with the wait-list group at both the 2-week and 4-month follow-up, with medium to small effect sizes. However, Belonging revealed significance at 4 months after the FCSs, by trend only ($p < .10$). Contrasts A revealed significance when comparing the baseline to the 2-week follow-up: Belonging, $F(1,204) = 11.65$, $p = .001$, $\eta^2 = .05$; Autonomy, $F(1,204) = 20.97$, $p = .000$, $\eta^2 = .09$; Accord, $F(1,204) = 23.47$, $p = .000$, $\eta^2 = .10$; Confidence, $F(1,204) = 21.77$, $p = .000$, $\eta^2 = .10$. Contrasts B did not reveal significance but supported the stability of these medium to small effects over the 4-month follow-up. Within-group simple effects analysis demonstrated that this effect was due to a significant change over time in the intervention group (Belonging, $F[1.87,190.97] = 5.43$, $p = .006$, $\eta^2 = .05$; Autonomy, $F[1.91,195.05] = 17.93$, $p = .000$, $\eta^2 = .15$; Accord, $F[1.83,186.52] = 17.35$, $p = .000$, $\eta^2 = .15$; Confidence, $F[1.84,187.41] = 13.29$, $p = .000$, $\eta^2 = .12$), while participants in the wait-list group showed no significant change.

Interpersonal relationships

For the IPR and IP, mixed-design ANOVAs showed a statistically significant Group × Time interaction effect in the *intention-to-treat* analyses (n = 208) with a small

TABLE 2

Main and Additional Outcomes: Descriptive Data at Baseline, 2-Week and 4-Month Follow-Up for IG (n = 104) and WLG (n = 104); ANOVAs Simple Effects and Effect Sizes for Time × Group Interaction and Between-Subjects Factor at 2-Week and 4-Month Follow-Up

					Simple effects on between-subjects factor			
					2 weeks		4 months	
	Baseline *M* (*SD*)	2 weeks *M* (*SD*)	4 months *M* (*SD*)	ANOVA time × group	*F* (*df*)	*d*	*F* (*df*)	*d*
Experience in social systems								
Total score								
IG	4.07 (.77)	4.54 (.74)	4.47 (.78)	$F(1.90,386.51) = 17.28$, $p = .000$, $\eta^2 = .078$	$F(1,204) = 17.51$, $p = .000$, $\eta^2 = .079$	.61	$F(1,204) = 13.17$, $p = .000$, $\eta^2 = .061$	.53
WLG	4.15 (.76)	4.07 (.81)	4.05 (.81)					
Belonging								
IG	4.25 (1.00)	4.57 (.88)	4.56 (1.04)	$F(1.91,388.69) = 6.01$, $p = .003$, $\eta^2 = .029$	$F(1,204) = 5.39$, $p = .021$, $\eta^2 = .026$	.32	$F(1,204) = 3.21$, $p = .075$, $\eta^2 = .015$	.27
WLG	4.39 (1.09)	4.26 (1.04)	4.29 (.99)					
Autonomy								
IG	4.19 (.91)	4.63 (.80)	4.61 (.83)	$F(1.90,386.99) = 11.44$, $p = .000$, $\eta^2 = .053$	$F(1,204) = 18.23$, $p = .000$, $\eta^2 = .082$	.62	$F(1,204) = 17.04$, $p = .000$, $\eta^2 = .077$	.61
WLG	4.17 (.84)	4.09 (.94)	4.05 (1.00)					
Accord								
IG	3.81 (1.00)	4.38 (.87)	4.32 (.95)	$F(1.89,385.61) = 12.16$, $p = .000$, $\eta^2 = .056$	$F(1,204) = 15.84$, $p = .000$, $\eta^2 = .072$	.59	$F(1,204) = 11.93$, $p = .001$, $\eta^2 = .055$	.50
WLG	3.94 (.87)	3.86 (.91)	3.83 (1.01)					
Confidence								
IG	4.04 (.97)	4.57 (.93)	4.39 (.97)	$F(1.91,388.65) = 11.31$, $p = .000$, $\eta^2 = .053$	$F(1,204) = 12.86$, $p = .000$, $\eta^2 = .059$	.54	$F(1,204) = 6.53$, $p = .031$, $\eta^2 = .038$	.38
WLG	4.11 (.94)	4.05 (1.00)	4.02 (.99)					
Interpersonal relationships								
IPR								
G	12.12 (6.00)	10.79 (5.65)	10.33 (5.65)	$F(1.74,354.64) = 5.88$, $p = .005$, $\eta^2 = .028$	$F(1,204) = 4.48$, $p = .035$, $\eta^2 = .022$	.32	$F(1,204) = 5.44$, $p = .021$, $\eta^2 = .026$	.36
WLG	12.03 (5.63)	12.64 (5.93)	12.41 (6.04)					
IR								
IG	1.98 (.59)	1.85 (.56)	1.82 (.51)	$F(1.96,399.76) = 5.45$, $p = .005$, $\eta^2 = .026$	$F(1,204) = 8.92$, $p = .003$, $\eta^2 = .042$	.45	$F(1,204) = 13.58$, $p = .000$, $\eta^2 = .062$	.53
WLG	2.06 (.57)	2.11 (.60)	2.11 (.58)					

Note. IG = intervention group, WLG = wait-list control group; IPR = Interpersonal Relations, Outcome Questionnaire (OQ-45); IP = Interpersonal Problems, Tool for the Evaluation of the Psychotherapeutic Progress (FEP).

effect size. Between-group simple effects analyses demonstrated that participants in the intervention group had significantly improved interpersonal relationships compared with the wait-list group in the short-term, 2 weeks and 4 months after the FCSs, again with small effect sizes. An exception was the IP, which showed a medium effect size at 4 months. Contrasts A revealed significance when comparing the baseline to the 2-week follow-up: $F(1,204) = 11.59$, $p = .001$, $\eta^2 = .05$ for IPR; $F(1,204) = 7.05$, $p = .009$, $\eta^2 = .03$ for IR. Contrasts B did not reveal significance but supported the stability of these small effects over the 4-month follow-up. Within-group simple effects analyses demonstrated that this effect was due to a significant change over time in the intervention group: $F(1.72,175.44) = 5.86$, $p = .005$, $\eta^2 = .05$ for IPR; $F(1.89,193.16) = 5.63$, $p = .005$, $\eta^2 = .05$ for IP. Participants in the wait-list group showed no significant change.

Participant status (active vs. observing participants)

Mixed-design ANOVAs showed no statistically significant Participant × Time interaction effect for the *intention-to-treat* analyses ($n = 208$) on any of the outcome measures; the main effects for participant status were likewise insignificant.

Adverse Effects

During the FCSs and over the 4-month study period, none of the study participants reported adverse events (see Ioannidis et al., 2004).

DISCUSSION

This is the first randomized controlled trial examining the absolute efficacy of FCSs on individuals' experiences in their personal social systems. It evaluated FCSs on dimensions that are central to the family constellations approach. We employed the Experiences In Social Systems Questionnaire, personal domain (EXIS.pers), an outcome measure developed against the background of the systems constellations approach (see Sparrer & Varga von Kibéd, 2008). We included interpersonal scales derived from the Outcome Questionnaire (OQ-45; Lambert et al., 2004) and the Tool for the Evaluation of the Psychotherapeutic Progress (FEP; Lutz et al., 2009). Effects were examined at short-term intervals in 2-week and 4-month follow-ups. Results demonstrate clearly improved experience in personal social systems in the intervention group, for both active and observing participants. Enhancements were observed in the experience of standing up for one's needs (autonomy), being at peace with how things are (accord), and being optimistic that challenging situations can be dealt with positively in the future (confidence). These improvements emerged with medium effect sizes after 2 weeks and remained stable over a 4-month period. Effects of FCSs on the interpersonal scales from the OQ-45 and FEP validated these results, although with minor effect sizes. These results are consistent with the findings of improved psychological functioning and high goal attainment after FCSs from the larger randomized controlled trial of which this study is a part (Bornhäuser et al., 2013; Weinhold et al., 2013).

Our findings suggest that FCSs have positive effects on the experience in personal social systems in an adult population presenting with relationship problems, particularly conflictive experience within their families. The range of participants' psychological functioning at the baseline and the proportion of clinical change assessed by the OQ-45 (see Weinhold et al., 2013) is comparable to data from counseling studies (Snell, Mallinckrodt, Hill, & Lambert, 2001). As this is a new instrument, there are no norms available yet; we, therefore, were unable to calculate clinical change. Effect sizes, however, were in the range of what is reported in both marriage and relationship counseling (Hawkins,

Blanchard, Baldwin, & Fawcett, 2008) and couple and family therapy (Shadish et al., 1993, in von Sydow, Beher, Schweitzer, & Retzlaff, 2010). A nonrecurring FCS, however, will not attain the effect sizes demonstrated for ongoing therapy processes reported elsewhere (see Weinhold et al., 2013).

The experience of belonging was demonstrated by trend at the 2-week follow-up with a small effect size. This may be due to the condition that the majority of our participants were married or living with a partner, which may have made belonging issues less central to them. They rather sought improved clarity (71%), that is, the experience of understanding the configurations of one's relationships with the other family members, as opposed to strengthened belonging (2%).

We did not observe any significant difference between active and observing participants. Active participants received more specific attention, yet group factors (see Johnson, Burlingame, Olsen, Davies, & Gleave, 2005) might have contributed to this equal benefit. As observers, the research team noted an increase in cohesion and group climate over the course of all FCSs. Observing participants frequently acted as representatives in active participants' family constellations because facilitators often brought large extended family systems onto the stage. Thus, observing participants may have received almost equally strong input—not just from their personal constellations, but from the group process as a whole.

FCSs impact the experience of belonging, autonomy, accord, and confidence in one's family. These dimensions are associated positively with health and negatively with psychopathology. FCSs also improve psychological functioning (Weinhold et al., 2013). There is as yet no evidence that experiencing one's family differently will make people healthier; however, findings from relational ethics (Grames et al., 2008; in Gangamma et al., 2012) allow us to assume that belonging, autonomy, accord, and confidence influence marital satisfaction, which in turn fosters psychological health.

Implications for Research

The findings clearly indicate that the experience of autonomy, accord, and confidence can be enhanced by FCSs in the short-term, and that the experience of belonging is also affected, though with less impact. Possibly, the influence of FCSs on the experience of belonging may increase in a clinical sample. Social exclusion is both a cause and consequence of mental health problems; mentally ill people are more likely to be socially isolated and are less likely to be employed, resulting in less income and more financial hardship (Frayn, 2012). FCSs are used in counseling and therapy alike and, thus, may enhance care in both contexts as they are characteristically focused, highly concentrated, short-term interventions.

Strength, Limitations, and Future Directions

This study has a number of strengths. It is the first randomized, controlled demonstration of the short-term efficacy of FCSs on the experience of Belonging, Autonomy, Accord, and Confidence—dimensions that are central to the systems constellations approach and specific to the family constellations approach. The study has strong ecological validity as FCSs are typically conducted, as in our study, in a 3-day format and with adult populations. Short- and mid-term effects were calculated at 2 weeks and 4 months after the FCSs. Attrition was very low because there were no drop-outs before completion of the study period and 91.8% of the sample could be included in the *per-protocol* analysis.

Some limitations are worth noting. Replications and extensions are needed, and discussion of long-term effects is still wanting. The absence of a standardized clinical diagnostic procedure prevents any statements as to whether FCSs may improve an ill person's

health. The implementation of a wait-list group instead of an appropriate comparator intervention (Rifkin, 2007) may also be criticized. The inclusion of only two very experienced facilitators does not allow for the assessment of potential therapist effects. Generalization is limited by the high percentage of participants with previous FCS experience, which might have affected sensitivity to FCSs. One can assume that these participants had developed an "FCS schema" (Anderson, 2001) and might have been trained in inter- and intrabody resonance (Froese & Fuchs, 2012). Having known the "rules of the FCS game," these participants may have been able to manipulate the system. On the other hand, one could assume that these people may have fallen short of the expected benefits in a previous FCS and they are thus trying again. Furthermore, generality is limited as the dominance of participants who were married or living with a partner could have underrepresented the apparent importance of belonging; it is also limited by the over-representation of highly educated middle-aged women.

Future studies should investigate the mid- and long-term effects of FCSs. We are currently conducting 8- and 12-month follow-ups with a subgroup from this study sample. Self-reporting measures are influenced by social awareness, self-knowledge, and response style (Johnson, Shavitt, & Holbrook, 2011). Observational measures should be included in future studies. Participants from more varied and clinical groups should also be examined. Furthermore, the level of previous FCS experience should be more exactly measured. If participants were randomly assigned as either active or observing participants, differences originating from participant status could be investigated. People with belonging-related goals should be included to more precisely assess the efficacy of FCSs on this dimension.

In addition, it would be worthwhile to implement an appropriate comparator intervention, or to conduct FCSs in combination either with established psychotherapies or with systemic interventions to explore whether it stimulates additional effects. More facilitators, with different fields of expertise, should be recruited to control for facilitator effects. The efficacy of other forms of systems constellations, such as organizational or symptom constellations (Weber, 2002; Weber & Drexler, 2002), should be investigated; here, the organizational domain of the EXIS (Hunger, Bornhäuser, Link, Voss et al., 2013) provides a useful outcome measure.

CONCLUSION

We boldly conclude that nonrecurring FCSs potentially improve individuals' experience in their family systems in the short-term, that is, after 2 weeks and 4 months. Despite the limitations discussed, the results encourage further research on family constellations, above all on mid- and long-term effects. The Experience in Social Systems Questionnaire, personal domain (EXIS.pers) provides an outcome measure assessing four important dimensions that the family constellations approach intends to improve: Belonging, Autonomy, Accord, and Confidence. Future research should attempt to replicate these results with clinical populations, either as a stand-alone procedure or, preferably, as an add-on to established psychotherapy and counseling.

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