



Social Support Networks of Individuals with Depressive Disorders: A Cross-sectional Survey in Former Psychiatric Inpatients in Germany

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Abstract

Depressive disorders are related to social withdrawal and a loss of social contacts. Moreover, a lack of social integration and social support are risk factors for relapse and rehospitalization. Despite the crucial role of social networks for mental health and social support, knowledge about the structure of social networks or how they promote social support in terms of coping with depressive disorders is scarce. The present study aims to analyze social support in people with depressive disorders using ego-centered social network analysis for formal description. Ninety-seven former psychiatric inpatients participated in the study. Network size and density, a small number of conflicts in the relationships of ego to alters, and the multiplexity of social support dimensions were associated with perceived social support—measured via Social Support Questionnaire (F-Soz-U-K-14). Considering relational ratios which correlated with perceived social support, five types of social support networks were differentiated by means of cluster analysis: (1) no social support, (2) professionally supported birth family, (3) the more the merrier, (4) concentrated support, (5) overchallenged nuclear family. More than each relational characteristic on its own, their co-occurring patterns as network types provide the very structures of social support. This underpins the crucial role of structural approaches and networking skills in social work practice.

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Keywords Depression · Social support · Social network · Social network analysis · Cross-sectional survey

Introduction

Approximately one-third of individuals undergoing inpatient depression treatment are rehospitalized for relapse within one year after discharge (Bitzer et al., 2011). About 20% of people diagnosed with depressive disorders develop a chronic course with, for example, very long depressive episodes and/or only partial remission of symptoms (Gilmer et al., 2005). In this respect, poor social integration and

low social support constitute important risk factors for an adverse course of illness (Hölzel et al., 2011; Mandelli et al., 2015), e.g. incomplete remission, frequent relapse, or chronicity. Social integration is defined by “the structure and quantity of social relationships, such as the size and density of networks and the frequency of interaction. Social support, on the other hand, refers to the function and quality of social relationships, such as perceived availability of help, or support actually received” (Schwarzer & Knoll, 2007, p. 244). Social integration is a prerequisite for social support (Smith et al., 2019, 2022), which can be distinguished into emotional, cognitive and practical social support (Schwarzer & Knoll, 2007). Since depressive disorders are related to social withdrawal, the symptomatology itself negatively affects social integration and the availability of social support (Levula et al., 2017). This underpins the crucial role of social integration and social support in coping with depressive disorders and illuminates social-participatory perspectives following the “person in environment approach” of social work (IFSW, 2014). As social integration and social support are realized in social networks, there have been repeated

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calls to reinforce the integration of social networks—such as family—in healthcare delivery (Wolff, 2012) as well as in clinical social work practice (Goldstein et al., 2009; Ruch et al., 2018). The relational perspective of analysis adopted here defines a social network as “a set of actors connected by cohesive relations” (Burt, 1980, p. 80). In ego centered network analysis, ego is the focal person, whose personal network is examined, all other actors are called alters; relations are distinguished as ego-alter ties or alter-alter ties, depending on whether ego is involved or not (Perry et al., 2018, p. 212).

In individuals diagnosed with depressive disorders, diminished symptomatology, improved recovery and enhanced quality of life are associated with a higher number and availability of intimate contact persons, the frequency of contact with these persons, and general subjective satisfaction regarding these matters (Corrigan & Phelan, 2004; Li et al., 2013; Smith et al., 2019, 2022). A large number of intimate and heterogeneous contact persons seems to be protective regarding the onset of depressive disorders (Santini et al., 2015), while a smaller number of intimate contact persons was found to lead to poorer illness-specific outcomes and increased rehospitalization (Albert et al., 1998; Wang et al., 2018). In contrast, Domènech-Abella et al. (2017) found that for persons aged 50 years and older, a network size over the median was significantly associated with higher odds of depressive disorders. Moreover, married persons were more likely to be depressed than persons who had never been married. However, the relationships themselves were not differentiated according to quality, i.e., whether they were positive or negative (e.g. conflicts, perceived criticism). Moreover, previous research focused mostly on single attributes of networks such as size or frequency of contact or perceived social support using standardized scales—bypassing the very structure of social networks themselves.

Social network analysis provides means to measure along relational dimensions, such as the extent to which the network members are connected to each other (Visentini et al., 2018). For female smokers, for instance, this density of alter-alter relationships emerged as a protective factor against depressive disorders (Lam et al., 2017). In addition, the size of the network was significantly associated with having a score in the depressed category, although the inquiry was limited to nine contact persons, likely due to research-pragmatic reasons. Milton and Knutson (2021) found for LGBTQ+ people, that getting support only by family of origin predicts depression levels significantly while most support is received from friends. Berkman et al. (2000) presented an integrated theoretical model of the interaction between social network structures and social support with regard to health. According to the authors, social support is influenced by social network structures and vice versa,

making social support a transactional mediator between social network structures and health or health behavior.

The objective of the present study is therefore to provide a formal description and differentiation of social network structures in individuals diagnosed with depressive disorders with respect to alter-alter relationships, allowing for more than nine alters and differentiating between positive and negative relationships as well as roles alters hold for ego (i.e. nuclear and birth family, friend or professional). Furthermore, it is necessary to set the relational structure in reference to perceived social support. Given the conflicting preliminary findings, different types of social networks should be distinguished when considering these structural properties.

Methods

Design and Sample

The present exploratory cross-sectional trial included former inpatients of a Department of Psychiatry and Psychotherapy of a University Medical Center in Germany. Patients were aged 18 years or older, had primarily been treated for a unipolar depressive disorder, had been hospitalized at least once between 07/2012 and 06/2016 for no less than 7 days, and did not object to being contacted for research purposes. The seven-day minimum duration of hospitalization was used as an inclusion criterion for the following reasons: (1) shorter admissions are often crisis interventions and thus do not incorporate regular treatment; (2) an admission of at least seven days ensures appropriate diagnostic procedures and thus a reliable diagnosis. Depression diagnosis was based on ICD-10 (F32.xx; F33.xx) and was made according to the current recommendations of the “National Care Guideline Unipolar Depression” (DGPPN et al., 2015) during the inpatient stay. Accordingly, we were able to ensure that all included patients were part of the target population for the trial. In 03/2017, invitations for participation including information about the study as well as a consent form were forwarded to all patients identified as eligible for the study (N = 535), of which N = 89 were undeliverable by post. Therefore, the potential sample comprised N = 446 individuals, of whom N = 101 provided informed consent. All patients who gave informed consent were contacted by telephone between 04/2017 and 06/2017 to conduct a standardized telephone interview. The standardized telephone interview could finally be conducted with N = 97 individuals. Accordingly, the response rate lay at 21.7% (N = 97 of N = 446 potential trial participants). The study was approved by an Ethics Review Committee and registered in the German Clinical Trials Register.

Measures

As methodological framework, we used ego-centered network analysis. Ego-centered network analysis (like any network analysis) can be considered a "third way" of social research. It combines the quantification capabilities of statistical survey research with the qualitative focus of attention, which is less on the attributes of several unconnected individuals but more on contextual embeddedness and processes of interaction in real groups (Emirbayer & Goodwin, 1994, p. 1416f-1417). Ego-centered networks describe the social structure surrounding a focal person (ego). The social structure is defined by network actors (alters), relational dimensions between ego and alters (ego-alter ties) as well as relationships between these alters (alter-alter ties). Figure 1 depicts an exemplary ego-centered network graph using the Layout "Yifan Hu Proportional". The white circle in the middle denotes ego; all alters (black circles) relate to ego. The curved lines symbolize the ties. The size of the nodes is proportional to their degree centrality, which is the number of connections to all other members of the network.

We developed standardized questions to collect data regarding the *network structure* with respect to social support. The questions were based on established measures of sociological network research (Burt, 1984; Fischer, 1991; Wellman, 1979) as well as psychiatric network research (Clifton et al., 2007; Stosberg, 1999) and have already been successfully applied in individuals with borderline personality disorder (Löwenstein, 2017). The procedure of the standardized telephone interview was as follows: First, eight standardized *name generators* were introduced as operationalized definitions of ego-alter ties corresponding to the dimensions of emotional, cognitive and practical social support (1) With whom have you had intensive contact within the last three months, because you particularly enjoyed being with this person? (2) Are there people who are so inspirational or fascinating to you that they have already served as a role model for you? (3) From whom did you last receive good advice and guidance when you were in a mental crisis? (4) Who has helped you with daily tasks within the last three

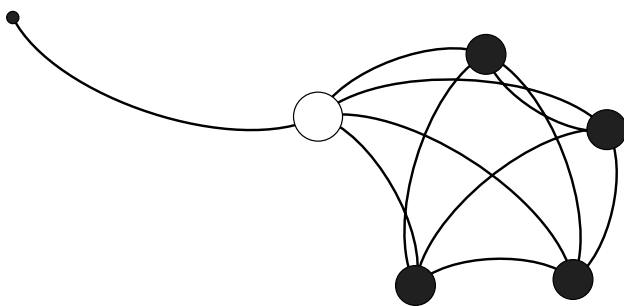


Fig. 1 Example network graph for Cluster 4 (Yifan Hu Proportional)

months? (5) Which people have given you the feeling that you are needed by them within the last three months? (6) In whose presence have you been able to relax and find peace in the last three months? (7) With which people whom you like have you also had conflicts within the last three months? (8) Please look at the people you have already named and see if there is anyone missing who supports you and is important to you). The interviewees wrote down the names of the alters in a list and assigned them to the letters A-Z without telling the names to the interviewers. This list remained with the interviewees alone; the further questions referred to the pseudonyms A-Z alone. As such, ego was able to anonymously name relevant alters with respect to social support, without any limitations on quantity. Subsequently, for practical reasons, only the first twelve alters named by ego were considered for further data collection and analysis.

In the second step, standardized name interpreters were used to record attributes of the named alters (sex (male/female); age (six categories: < 16; 16–30; 31–45; 46–60; 61–75; > 75 years of age); duration of relationship (five categories: < 3 months; 3–12 months; 1–5 years; > 5 years; nearly since birth); discontinuation of contact, for at least one year, with alters with a relationship for longer than one year (yes/no); accessibility defined as the time necessary to meet the alters at their usual habitation (four categories: < 15; 15–60; 61–120; > 120 min); role of alters (five categories: nuclear family (comprising: partners, own child); birth family (comprising: parents, siblings, other family members); informal support (comprising: friends, ex-partners, colleagues, neighbors, fellow patients); professionals (comprising: physicians, psychotherapists, social workers, other professional helpers); others).

Perceived criticism refers to negative social interactions in terms of high-expressed-emotion (Hooley, 2007) and is a relevant predictor for the course of illness in depressive disorders, specifically to the probability of relapse (Hooley & Teasdale, 1989). Therefore, the Perceived Criticism Scale (PCS) was applied for all alters. The PCS is a single-item-scale asking "How critical do you consider this person to be of you" with response options from "0" (not critical at all) to "9" (highly critical) on a 10-point Likert-type scale (Bachmann et al., 2006; Hooley & Parker, 2006; Hooley & Teasdale, 1989). The PCS was initially developed and tested on a sample of patients with depressive disorders and correlates with expressed-emotion scores on the Camberwell Family Interview (CFI), which can be considered the gold standard of expressed-emotion measurement (Bachmann et al., 2006; Hooley & Parker, 2006). Third, alter-alter relationships were recorded (mutual contact between alters (with "no" coded as "0", "on average no more than once a month" coded as "1", and on average more than once a month" coded as "2"); presence of conflict between alters with mutual contact (yes/no)).

Fourth, the German version of the standardized short form of the Social Support Questionnaire (F-SozU-K-14) was used in order to contrast network structures examined within the ego-centered network analysis with perceived social support (Fydrich et al., 2009). The F-Soz-U-K-14 was standardized on the basis of a representative German sample, shows good psychometric item properties and a very acceptable reliability (internal consistency Cronbach's $\alpha = 0.94$). The F-Soz-U-K-14 covers social support from a one-dimensional perspective as perceived or anticipated social support. The scale contains 14 items focusing on practical and emotional support as well as social inclusion, rated on a 5-point Likert-type scale from "1" (does not apply at all) to "5" (applies completely). A sum score ranging from "1" (low perceived social support) to "5" (high perceived social support) can be calculated. Additionally, participants were asked how satisfied they are with the social support perceived by their social network in general, using the same 5-point Likert-type scale as the F-SozU-K-14.

Finally, basic sociodemographic data of ego were gathered (age; sex (male/female); living in a long-term relationship (≥ 6 months; yes/no); having one's own children (yes/no); shared household (yes/no) and household size (number of persons living in the same household)), and participants were asked how many times in their life they had undergone psychiatric inpatient stays.

Network Analyses

For data analysis, we used IBM SPSS Statistics Version 26. Although there are more specific software tools for social network analysis, the use of SPSS allowed us to combine relational analyses with conventional variable-based research. For the relational analysis, the employed procedures and syntax followed the widely accepted recommendations of Müller et al. (1999) for using SPSS in ego-centered network analysis. In relational analysis, the direct and indirect connections among actors are described by specific ratios:

- The network size comprises the number of alters designated by ego as socially supportive by answering the name generators;
- for density, alter-alter relationships (weighted from "0" to "2" (see above)) are related to the potential maximum of connectedness ("0" no contact between alters; "1" contact between all alters);
- conflict density describes the share of conflictual relationships in the entirety of all alter-alter relationships ("0" no conflictual relationships; "1" all relationships are conflictual);
- ego-alter conflicts are measured using name-generator seven (see above), and the share of conflictual relation-

ships is shown ("0" no conflicts; "1" conflict in all ego-alter relationships);

- the simultaneous appearance of alters on various dimensions of social support operationalized as name generators (see above, but for name-generator seven) is quantified as multiplexity ("0" named for only one generator; "1" named for all);
- homophily is the share of alters which have specific attributes in common with ego—here age and sex ("0" nothing in common; "1" complete homophily);
- heterogeneity only for the alters measures the extent of having relevant attributes in common based on the Lieberman index (Lieberman, 1969)—here age ("0" all same age, "1" infinite heterogeneity).

With the exception of network size, all relational ratios are scaled from "0" to "1". However, for further analyses, we also transformed network size into values from "0" to "1". For relational analysis, we first calculated all relational ratios named above. Second, using Pearson coefficient, we correlated all relational ratios with perceived social support, depicted by the sum score on the Social Support Questionnaire (F-SozU-K-14).

Third, all relational ratios correlating significantly with the F-SozU-K-14 (network size, density, ego-alter conflicts, multiplexity) were used as the basis for a cluster analysis. By using cluster analysis, we aimed to develop a typology of social support networks resulting strictly from structural patterns in a coherent way, thus fulfilling the transactional interconnectedness between social network structures and social support. The underlying question is, whether perceived social support does not rather depend on certain types of social networks whose structure is complexly patterned by different combinations of relational characteristics than whether the relational characteristics in isolation from each other would promote or hinder social support across the board. The partly contradictory findings of the current state of knowledge considered (see introduction) also gave reason for this.

In cluster analysis, the cases under study (here, the ego-centered networks) are grouped according to statistical criteria. As a result, groups of such cases are formed that are very similar with respect to characteristics of interest because they have comparable variable values among themselves. In contrast, cases that are grouped in different clusters differ from each other to the maximum extent. If these statistically formed groups can be interpreted meaningfully, one can speak of a typology.

To measure proximity, we used the Ward algorithm with squared Euclidean distance. All values of the relational ratios correlating with F-SozU-K-14 were transformed into a range between 0 and 1. Based on a dendrogram, which illustrates the arrangement process, we selected the last cluster

solution before further fusions would create a large jump in distance or dissimilarity within a new cluster. In doing so, five clusters were differentiated and then proofed for content plausibility.

To show that the cluster structure is interpretable, meaningful and compatible with preliminary research, analysis of variance (ANOVA) was subsequently used to compare scores on the F-SozU-K-14, subjective satisfaction regarding social support received from the social network, perceived criticism, and proportions of roles that alters hold for ego, with each cluster. Moreover, Eta was used to check the meaningfulness of the cluster structure for social support.

Results

Sample Description

In all participants ($N=97$), the most recent hospitalization was due to the primary diagnosis of a unipolar depressive disorder (F32.xx and F33.xx). Most of the participants were female (64.9%) and the mean age of the sample was 50.4 years (SD 14.5; Md 52; range 20–83) years. 55.7% of the participants were in a long-term relationship. 54.6% have children and 60.8% shared their household with others. The average household size was 2.5 persons (SD 0.8; Md 2; range 2–5). On average, participants had undergone 3.1 psychiatric inpatient admissions (SD 2.4; Md 2; range 1–12) in their lives.

Relational Analysis and Social Support

The mean network size was 6.36 (SD 2.39) alters. Regarding weighted density, 41% (SD 24%) of the potential

connectedness in terms of alter-alter relationships was realized. While conflict density in alter-alter relationships was 5% (SD 10%), conflicts were found in 18% (SD 21%) of ego-alter relationships. Multiplexity—meaning the simultaneous appearance of alters on various dimensions of social support—lay at 30% (SD 13%). In terms of homophily, 60% (SD 24%) of alters were of the same sex and 46% (SD 21%) in the same category of age (with a breadth of 15 years) as ego. Heterogeneity regarding age lay at 67% (SD 19%). With regard to perceived social support, the mean sum score on the F-SozU-K-14 was 3.73 (SD 0.97). All relational ratios were correlated with the F-SozU-K-14 sum score. Network size ($r=0.23$), density ($r=0.29$), ego-alter conflicts ($r=-0.22$) and multiplexity ($r=0.33$) showed significant ($p<0.05$) but moderate correlations, while conflict density, homophily regarding sex and age, as well as heterogeneity regarding age were not statistically significantly correlated with perceived social support.

Cluster Analysis

As the relational ratios network size, density, ego-alter conflicts and multiplexity correlated significantly with the F-SozU-K-14 sum score, they formed the basis for a cluster analysis. Table 1 shows the means of these relational ratios for each cluster; additionally, it contains the means of attributional characteristics in order to check the plausibility and meaningfulness of this typology. Furthermore, we ran analyses of variance (ANOVA) for perceived social support, satisfaction regarding social support, perceived criticism and different roles that alters hold for ego (nuclear family, birth family, informal support, professionals, others) using the clusters as independent variables (c.f. Table 1). The clusters differentiated between perceived social support and

Table 1 Relational structure and social support by network types

Cluster	1	2	3	4	5	ANOVA	
	Mean					F(4,92)	Sig
Size	5.63	5.83	<i>10.17</i>	5.00	5.31	34.23	0.000*
Density	0.18	0.57	0.43	0.66	<i>0.98</i>	46.45	0.000*
Ego-alter conflicts	0.11	0.33	<i>0.49</i>	0.00	0.37	23.59	0.000*
Multiplexity	0.30	0.25	0.29	0.33	<i>0.36</i>	2.45	0.051
Social Support	2.87	3.52	4.12	<i>4.29</i>	3.87	7.62	0.000*
Satisfaction	3.13	3.77	4.06	<i>4.50</i>	3.46	5.14	0.001*
Perceived criticism	3.00	3.48	3.67	3.20	<i>5.00</i>	2.17	0.079
Nuclear family	0.13	0.17	0.14	0.34	<i>0.40</i>	5.96	0.000*
Birth family	0.11	<i>0.23</i>	0.18	0.16	0.20	1.19	0.323
Informal supp	0.38	0.36	<i>0.46</i>	0.33	0.29	1.18	0.324
Professionals	<i>0.29</i>	0.19	0.14	0.13	0.01	6.06	0.000*
Others	0.08	0.05	0.07	0.05	<i>0.10</i>	0.53	0.711
Count	16	<i>30</i>	18	20	13		

$n=97$, * ≤ 0.01 . Italic is the highest value of all five clusters, bold is the lowest

satisfaction regarding social support, but also differentiated between proportions of alters from nuclear family and professionals, each at a highly significant level, thus supporting a typology. Whereas perceived criticism and proportions of birth family and informal supporters were not significantly differentiated by the clusters, they were taken into account in order to check content plausibility. The resulting cluster structure correlates with social support, much more than each relational ratio on its own (Eta: 0.50).

The five different network types can be described as follows (c.f. Table 1):

The relational structure of Cluster 1 (“no social support”) is characterized by a medium size of 5.63 alters, by far the lowest density (18%), few ego-alter conflicts (11%) and a multiplexity of 30%. While the number of nuclear (13%) and birth (11%) family members as well as perceived criticism (3.00), satisfaction with social support (3.13) and perceived social support (2.87) is the lowest among these clusters, the proportion of professionals (29%) is by far the highest.

Cluster 2 (“professionally supported birth family”) is characterized by a size of 5.83 alters, a density of 57%, 33% ego-alter conflicts and the smallest amount of multiplexity (25%). These networks are further characterized by the highest number of birth family members (23%) but also a high proportion of professionals (19%), while perceived criticism is low (3.48) and satisfaction with social support (3.77) as well as perceived social support (3.52) are moderate.

Regarding the relational structure, Cluster 3 (“the more the merrier”) comprises by far the biggest networks, with a medium size of 10.17 alters; but the highest number of ego-alter conflicts (49%) is also found in this cluster. However, satisfaction with social support (4.06) and perceived social support (4.12) is high. Density (43%) and multiplexity (29%) are moderate. Approximately one in two alters neither belongs to professional services nor to the birth or nuclear family, and is instead categorized as an informal supporter (46%).

Cluster 4 (“concentrated support”) is characterized by the smallest networks with a medium size of five alters, density of 66% and no ego-alter conflicts at all. Multiplexity is 33%. Half of the alters are part of the birth family (16%) or nuclear family (34%), while the remaining half are other informal or professional supporters. Within Cluster 4, the highest amount of satisfaction with social support (4.50) and perceived social support (4.29) is found. Figure 1 (see above) exemplifies a network of this cluster.

The relational structure of Cluster 5 (“overchallenged nuclear family”) is characterized by a medium size of 5.31 alters and 37% ego-alter conflicts as well as the highest multiplexity (36%) and the highest density (98%) of all clusters—almost all alters are in close contact with all other alters. While most of the alters are from the nuclear (40%) or birth (20%) family, Cluster 5 shows the smallest number

of informal supporters (29%) and by far the fewest professionals (1%). Perceived criticism is the highest in this cluster (5.00), while the medium satisfaction with social support is 3.46 and the medium perceived social support is 3.87.

Discussion

In this exploratory cross-sectional study employing standardized telephone interviews and using ego-centered network analysis as a methodological framework, we examined the formal description and differentiation of social support networks in former inpatients diagnosed with depressive disorders. Previous studies focused solely on single network characteristics and/or social support—each measured attributionally (Visentini et al., 2018) and without regarding their relational constitution. By contrast, our results underpin the interconnectedness or interaction between social support and social network structures, as the relational ratios network size, density, multiplexity, and (the absence of) ego-alter conflicts were significantly correlated with perceived social support in social networks of persons diagnosed with depressive disorders. Rather, it appears that the availability of social support is enhanced by the number of intimate contact persons (network size) and their interconnectedness (density), without ego-alter conflicts, and more than one dimension of social support within the relationship (multiplexity). These findings are strong arguments for indirect interventions in social work practice, which tend to address the latter in the relationship between person and environment. We believe that social work is better equipped to do this task than other health professions that focus merely on symptom reduction or behavior change. As Gitterman et al., (2021, p. 319) put it:

We also must direct our attention to the exchanges between clients and their social network. Mobilizing or strengthening supportive connections already in existence, finding new linkages and reestablishing old ones, enlisting the aid of natural helpers, and helping clients disengage from maladaptive affiliations improve transactions between clients and their social networks.

However, as conflict density in alter-alter relationships as well as homophily and heterogeneity were not correlated with perceived social support, our findings suggest that not all relational dimensions are relevant for persons diagnosed with depressive disorders to perceive social support. To further understand the interconnectedness between social support and social network structures, we used the relational ratios which significantly correlated with perceived social support to identify clusters, or types of social support networks, respectively, in persons diagnosed with depressive disorders to conduct a cluster analysis. Structural

characteristics co-occur in a complex manner, and together, they characterize the types of social networks which constitute the very structures of social support, rather than each characteristic promoting social support by itself. For example, it is precisely those clusters with the highest perceived social support and satisfaction with social support that differ in terms of size and share of ego-alter conflicts: Whereas there are no ego-alter conflicts in the smallest networks of Cluster 4, the comparatively largest number of conflicts with alters in Cluster 3 seems to be compensated for by their sheer multitude. Furthermore, Clusters 3 and 4 notably differ regarding the proportion of family members (Cluster 3: 32%; Cluster 4: 50%) and informal supporters (Cluster 3: 46%; Cluster 4: 33%). It can be assumed that both the direct and the preventive effect of social support in social networks (Diewald & Sattler, 2010) can be caused by strong ties (e.g. as represented by family members as in Cluster 4) as well as by weak ties (e.g. as probably represented by informal supporters as in Cluster 3; Granovetter, 1983). Therefore, healthcare interventions to foster social support in the social networks of persons diagnosed with depressive disorders should be open to including close relatives as well as alters whose relationships to ego can be seen as weak ties. As mentioned above, in this regard, especially ego-alter conflicts and feeling overwhelmed have to be taken into account in order to understand how the potential of the family can be unlocked and retained (e.g. Cluster 4) rather than being a burden for those affected. This is apparent, for instance, in Cluster 5, which has the highest proportion of family members but also the highest amount of perceived criticism. The comparison between Clusters 1 and 5, which differ vastly in terms of density (Cluster 1: lowest; Cluster 5: highest) and the proportion of professionals (Cluster 1: highest; Cluster 5: lowest) as well as the proportion of family members (Cluster 1: 24%; Cluster 5: 60%), shows that professionals can barely replace social support by family members: Satisfaction with social support as well as perceived social support is lowest in Cluster 1 but moderate to good in Cluster 5. It is more likely that professionals intervene when social support from family members, or perhaps also from informal supporters, is lacking.

In light of our findings, we argue that inconsistent results regarding the influence of single attributes of social networks—such as network size or an alter’s role for ego, i.e. marital status—on (coping with) depressive symptoms can be resolved by taking a consistently structural or relational approach (Emirbayer & Goodwin, 1994). As social support can be seen as a transactional mediator between social network structures and health (Berkman et al., 2000), this argument is substantiated by the strong correlation between the cluster structure and perceived social support. As our results show that different network clusters are related to perceived social support in different ways, for healthcare interventions

in persons diagnosed with depressive disorders, we would suggest an approach including (a) a detailed assessment of network structures in terms of alters, density, ego-alter conflicts and multiplexity using, for example, resource-oriented network maps; (b) reflecting on the identified networks with the client in terms of existing and usable/accessible social support resources, but also lack of resources; and (c) if necessary, temporary professional replacement for social support, without neglecting (d) to develop or restore “natural” support networks together with the client. By taking such a relational perspective, social work fulfills its core task of engaging “people and structures” (IFSW, 2014) by intervening “at the points where people interact with their environment” (IFSW, 2014).

Of course, it is up to the professionals alone to design appropriate interventions, aware of the concrete case and after making a social diagnosis, which as mentioned should be based on a social network diagnosis. Though, far from promoting a technological fallacy that unambiguous recommendations for action could be derived from scientific findings, we would nevertheless like to put forward some initial thoughts for discussion on how these complex relational patterns, as we have distinguished them in five network types, can be taken into account by practical social work: In cluster 1 (“no social support”), there is a great need to temporarily replace the (non-existent) network structures with professional relationship work (Parkinson, 2018) in order to establish “friendly relations” (Addams, 1910, p. 366) on this basis and thus force involvement in the community. In cluster 4 networks (“concentrated support”), on the other hand, the highly supportive family members must be addressed in turn so that they receive the support they need, as in cluster 2 (“professionally supported birth family”), to maintain their functionality in the long term. This can be realized, for example, through psychoeducation for relatives (Frank et al., 2014). In our opinion, this approach would also be advisable for networks of cluster 5 (“overchallenged nuclear family”); in addition, however, family support should be expanded to include nonfamilial informal help (e.g., friends). A large number of so-called weak ties keeps the networks of cluster 3 from collapsing despite high conflict density; the pattern “the more the merrier” can be seen as a subjective coping strategy, which is to be acknowledged in a lifeworld-oriented way (Kraus, 2019). Nevertheless, social work can offer mediation here to reduce the burden of conflict.

In order to derive concrete strategies for social work practice, it can be helpful to strive for relational social work (Folgheraiter, 2007; Goldstein et al., 2009). Since Jane Addams’ early references to pragmatist approaches of education and philosophy, relational perspectives have been indispensable, and are part of social work history (Dewey & Bentley, 1960; Murdach, 2007). Relational research strategies have already been adapted to social work (Eckl et al., 2019; Herz, 2014).

In our view, broadening the perspective beyond personal behavior and individual conditions, and taking into account the social constitution of problematic situations, renders clinical social work as an indispensable part of multiprofessional arrangements in health care.

The present study is based on a population with a definitive diagnosis of depressive disorders as the primary cause of hospitalization, and thus represents a population from routine inpatient depression care. However, as the response rate was 21.7% (N = 97 of N = 446 potential trial participants), the generalizability of the findings is a critical issue. Accordingly, it remains unclear whether individuals with, for instance, more supportive social networks were more likely to participate in this survey, which may have biased the results. Moreover, it is highly likely that the perceived and anticipated social support was overestimated, as individuals are more likely to report positive than negative aspects (Fadnes et al., 2009). Additionally, while all participants had received a reliable diagnosis of depressive disorder when they were hospitalized—which is a strength of the study—we did not have any information about the current experience of illness and its implications for everyday life. However, the distribution of the examined sociodemographic and clinical variables within this sample corresponds to their distribution in individuals in inpatient depression care in Germany (Härter et al., 2004). Therefore, it can be assumed that the study addressed a relevant sample of participants with regard to contextual factors of populations in routine inpatient depression care. It should also be noted that the data was already collected in 2017. On the basis of our data, influences that have occurred in the meantime, such as the coronal pandemic, cannot be reflected in terms of their potential impact on social support networks. Since our study focuses on possible typifications of social support networks, the results can nevertheless be used to clarify relational-structural perspectives and to derive indications for the design of clinical social work that consistently takes into account the involvement of clients in social support networks.

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Data Availability Not applicable.

Declarations

Conflict of interest The authors declare that they have no conflict of interests.

Ethical Approval The study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of the University of Freiburg Medical Centre (Date: 20. December 2016; Number: 574/16).

Consent to Participate Informed consent was obtained from all individual participants included in the study.

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