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Beyond Institutional Boundaries: The Relationship Between the Personal Networks of Young People in Residential Care and Their Sense of Belonging

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ABSTRACT

A sense of belonging is a basic human need that relates to the feeling of social connectedness and closeness one has in one's social world. Moving to a residential care facility can have far-reaching effects on young people's sense of belonging, as it usually causes a reconfiguration of their personal network. Therefore, this study examined how the personal networks of young people in residential care are associated with their sense of belonging. The sample of this cross-sectional study consists of 393 young people from 94 residential care facilities in the German-speaking part of Switzerland. The descriptive results indicate that a large share of the members of their network live outside the residential care facility. Random intercept model analysis showed that the network size, the number of supportive relationships and the frequency of contact with network members significantly predicted young people's sense of belonging. It can be concluded from the results that residential care staff should support young people in maintaining their personal network beyond the boundaries of the institution to ensure their sense of belonging.

1 | Introduction

A sense of belonging is a basic human need that relates to the feeling of social connectedness and closeness one has in one's social world (Baumeister and Leary 1995). Many studies have shown that the desire to belong is strong among children and youth in residential care (Biehal and Wade 1996; Emond 2014; Negård et al. 2020; Roche 2019). Research has stressed that personal relationships are an important facilitator of belonging (Mahar et al. 2013). Moving to a residential care facility can have profound effects on young people's sense of belonging

(May 2011), as the relocation can trigger a reconfiguration of their personal relationships (Roche 2019; Wrzus et al. 2013). Young people may lose important connections while forming new ones in out-of-home care (Perry 2006). The present study argues that a personal network approach provides a new perspective on how young people in residential care are socially embedded and how this relates to their sense of belonging. A personal network consists of people who are relevant to the young person's life, regardless of whether they get along well or where they live. In other words, a personal network consists of the people who matter to the young person. In the context of

out-of-home placements, a sense of belonging is an important dimension as it is an indicator not only of their well-being (Rejaän et al. 2022) but also of their social inclusion (Crisp 2019).

1.1 | Personal Networks and Belonging

Each of our everyday lives is interwoven with those of other people, with whom we can have relationships of different degrees of importance (Settersten 2015). This basic principle is referred to as 'linked lives' or 'networked lives' in life course research and theory (Vacchiano and Spini 2021). One of the key arguments is that the lives of individuals influence other lives and vice versa (Settersten 2015). The influence affects a variety of areas, such as emotions, ideas, attitudes, health and goes far beyond close relationships (Christakis and Fowler 2009). For some time now, social network analysis has been contributing to refining the understanding of personal relationships and their mechanisms over the life course (Vacchiano and Spini 2021). Linked lives can be conceptualized as an individual's unique set of relationships, which is referred to as a personal network in the literature on social network analysis (McCarty et al. 2019). The core assumption of the present study is that the sense of belonging of young people in residential care is associated with their personal network. This assumption emphasizes the quality of relationships and interactions between network members as variables with predictive value (Easterbrook and Vignoles 2013). Throughout our life, it is the important relationships that accompany us through the different stages and co-evolve with us (Kahn and Antonucci 1980). Therefore, a personal network has a history as it consists of ties of varying duration. While some ties date back to childhood, others may have lasted less long because they were important at a particular stage of life (Bidart and Lavenu 2005). This temporal dimension is of central importance for building a sense of belonging. While short-term relationships allow us to share experiences and achieve closeness, it is the long-term relationships that establish a sense of belonging (Hollstein 2023). Sense of belonging is linked to the principle that individuals have the right to choose what group(s) or individuals they want to belong to. However, some important relationships are imposed upon us (e.g., parents, siblings and kin), while others are chosen more freely (e.g., friends and workmates). According to Hollstein (2023), predetermined relationships are associated with natural belonging, which provides security and identity, but also forced adaptation and control. By contrast, non-predetermined relationships are an opportunity for freedom of choice and individualism but are also associated with greater uncertainty. A personal network consists of a certain number of important relationships, each of which is unique. However, the proposed network approach focuses on the network itself and not on individual relationships. In doing so, the present research uses a meso-level perspective, where personal networks are located between the micro- and macro-level of society (Vacchiano and Spini 2021). This means the research interest focuses on structural influences on young people's sense of belonging, both in and outside the residential care facility. This perspective is innovative in that it acknowledges that children and young people in residential care have a personal life (Smart 2007) in which they decide for themselves who they count as important. Hence, social relationships in the residential care setting may or may not play a role in the young people's personal networks.

1.2 | Important Relationships in Residential Care

Literature reviews suggest that the relationships of children and young people in residential care have been the subject of numerous studies (Cameron-Mathiassen et al. 2022; Roche 2019). Studies have stressed the significance of family members, peers in the residential care facility and members of the staff as important relationships (Biehal and Wade 1996; Cameron-Mathiassen et al. 2022; Kristan et al. 2022; Roche 2019; Singstad et al. 2021).

Young people's relationships with peers living in the same facility play a significant role in their everyday lives (Emond 2003). Peer relationships are often mentioned as important because they provide a sense of camaraderie and understanding among young people, as well as emotional and instrumental support (Emond 2003; Roche 2019). However, young people also reported that peer relationships are a source of insecurity, fear and exclusion (Cameron-Mathiassen et al. 2022). Relationships with family members also provide young people with practical and emotional support, but furthermore with a sense of continuity and identity (Biehal and Wade 1996; Cameron-Mathiassen et al. 2022). Young people's relationship with their mother is emphasized as particularly important. Research has shown that the mother is the most important source of support (Pinchover and Attar-Schwartz 2018) and that young people who rate the quality of attachment to their mother highly are less likely to have emotional-behavioural difficulties (Shalem and Attar-Schwartz 2022). However, research has pointed out that family relationships are often perceived as constrained and complex (Cameron-Mathiassen et al. 2022; Roche 2019). Due to the separation between the young people and their parents, the benefit of the parent–child relationship is reduced (Roche 2019), and contact frequency often decreases over time (Sen and Broadhurst 2011). Further research has also underlined that youth in residential care experience less satisfaction in their relationships with friends and family than youth from the general population (Kristan et al. 2022; Tordön et al. 2021). Young people in residential care are more likely to have smaller networks, consisting of fewer family members and peers and less frequent contact with network members (Günther 2008; Kristan et al. 2022). Furthermore, they receive lower levels of support than those from the general population (Kristan et al. 2022; Singstad et al. 2020). The support providers also differ between the two populations. Young people in residential care are significantly less likely to report that their mother, father, sibling(s) or neighbour(s) provide them with support (Singstad et al. 2020). In addition to those findings, research shows a gender difference in residential care: girls report a higher level of perceived social support compared to boys (Pinchover and Attar-Schwartz 2018). Unlike girls, boys in residential care reported a decreasing number of support providers in their network as they aged (Singstad et al. 2021). Moreover, research has shown that young people in residential care from divorced families receive less sufficient support from their network than those with married parents (Pinchover and Attar-Schwartz 2018).

Young people also mention caregivers and other staff members as important relationships. Caregivers provide young people with care, upbringing, attachment, instrumental support and participation (Roche 2019) along with safety (Sellers et al. 2020). However, the development of a positive relationship with staff

members requires proximity, open communication and one-on-one time with the caregiver (Rabley et al. 2014). Furthermore, research has shown that emotional closeness with staff affects young people's well-being. Higher emotional closeness contributes to more stability in young people's well-being (Costa et al. 2020). Research has also shown that some young people do not get as much 'quality time' with staff as they wish, that staff members favour certain children and treat them differently, that some young people suffer from severe conflicts with staff members and that punishments are perceived as inappropriate (Roche 2019). Furthermore, the quality of the relationship between young people and staff differs between girls and boys. Boys perceive more criticism and arguments with staff, while girls are more likely to experience support and appreciation (Pinheiro et al. 2022).

1.3 | Belonging in Residential Care

Sense of belonging is closely linked to how young people are seen by their peers and how they interact with each other (Emond 2014). In particular, positive peer relationships or friendships are fundamentally linked to a sense of belonging (Roche 2019). Relationships with peers can help to reduce the feeling of being different from other children and to manage experiences of stigmatization better (Negård et al. 2020). A study by Emond (2014) showed that peer relationships are perceived differently by young people in residential care than relationships with adults, as they are freely chosen. As far as young people's sense of belonging is concerned, relationships with peers can offer more than relationships with staff (Cameron-Mathiassen et al. 2022). Relationships with staff, although they are often important to young people, for instance as attachment figures (Harder et al. 2013) or to fulfil their needs (Sellers et al. 2020), are seldom mentioned as facilitators of belonging. Relationships with family, including the biological and extended family, are associated with a sense of belonging, even if those ties do not provide support. It is the symbolic role of these relationships that creates a sense of belonging (Biehal and Wade 1996). However, children in residential care can have different concepts of family depending on their biography and history in residential care, including forms such as 'institutional family' (Roche 2019). Therefore, children sometimes use family terminology when talking about their relationships in residential care facilities (Kendrick 2013). In addition to relationship-based factors, it has been shown that a sense of stability and continuity in residential care is necessary to develop a sense of belonging (Thoburn 2016).

Research has also shown that there are certain barriers that make it difficult for young people to develop a sense of belonging in residential care. For instance, Holmes et al. (2018) found that placement moves, the staffing structure, relationships with staff and the stigma behind residential care can be possible barriers. Furthermore, young people who feel disconnected from their family and who have ambivalent feelings towards their caregivers lack a sense of belonging (Roche 2019). Another barrier is the fact that the young person's place of residence is not under their own control but rather determined by residential care (Cameron-Mathiassen et al. 2022).

2 | Summary and Hypotheses

As the previous sections have shown, research considering meaningful relationships of children and young people in residential care has highlighted certain types of relationships, particularly those with family members, peers and caregivers (Cameron-Mathiassen et al. 2022; Roche 2019). These relationships are often looked at separately. As a result, only a selection of important relationships is analysed. This focus is limited because it does not consider the fact that young people in residential care are embedded in more complex and ambiguous sets of relationships (Kendrick 2013). The personal lives of young people in care can be characterized by far more complex forms of belonging that are not tied to a physical location or relationship types, as qualitative research shows (Torbenfeldt Bengtsson and Mølholt 2018). To consider the diverse configurations found in young people's relationships and their associations with their sense of belonging, a personal network approach is used in the current study. Personal networks of young people in residential care are expected to vary in their size, composition and relational structures. Relationships within personal networks are a source of support, conflict and ambivalence, all of which have various effects on individuals (Widmer 2016). From that perspective, it is the features of a personal network that are associated with one's sense of belonging. In this study, we test the following five hypotheses:

First, we expect larger personal networks to be positively associated with young people's sense of belonging. Larger networks offer membership in several groups (e.g., family, friends and classmates) and therefore enable a higher degree of individualization based on the preferences and needs of an individual (Hollstein 2023). The feeling of belonging to different groups (Mahar et al. 2013) is especially important during adolescence, since research has shown that personal networks in that period are characterized by the processes of expansion and differentiation. For instance, friendships are important to meet adolescents' attachment needs, while parents serve as a continuing source of caring (Collins 1997). In addition, the members of larger networks can replace one another if one person is not available (Schacter and Margolin 2019).

Hypothesis 1. *The larger a young person's personal network, the greater their sense of belonging.*

Second, research has shown that perceived social support is fundamental to developing a sense of belonging in residential child and youth care (Roche 2019). The social support offered in personal networks is associated with several functions that promote interpersonal connectedness, such as emotional closeness, safety, and trust (Kadushin 2011). In personal networks that consist of a high share of supportive ties, support is more likely to be provided collectively rather than individually (Widmer 2016), which is expected to be positively associated with young people's sense of belonging, because it produces more cohesion.

Hypothesis 2. *The larger the share of supportive relationships in young people's personal network, the greater their sense of belonging.*

Third, we expect that young people in residential care who regularly have stressful disputes with a great share of the members of their personal network will have a lower sense of belonging. Sense of belonging is closely linked with the feeling of 'fitting in' (Mahar et al. 2013). Severe and frequent disputes with a high proportion of network members are likely to be associated with disappointment and frustration among young people, because they are not properly understood by the members of their network. This is expected to be associated with feelings of distance and otherness towards others (Lee and Robbins 1995).

Hypothesis 3. *The greater the share of conflictual relationships in young people's personal networks, the lower their sense of belonging.*

Fourth, research indicates that frequent contact with network members is a prerequisite for creating a sense of belonging, as it fosters familiarity and closeness in relationships (Hollstein 2023). We argue that both frequent face-to-face and technology-based forms of contact (e.g., on the internet or by telephone) between young people and their network members promote a greater sense of belonging. While face-to-face forms of contact are driven by the places where the young people spend time, technology-based contacts give them a wider range of choice about their circle of continuing relationships (Kahn and Antonucci 1980).

Hypothesis 4. *The more often young people come into contact with the people in their personal network, the greater their sense of belonging.*

Fifth, we hypothesize that the presence of important relationships in the residential care facility where young people live is positively associated with their sense of belonging. Research has suggested that close relationships among children in residential care settings are crucial for their sense of belonging because they promote the co-production of experiences without pathologizing their situation (Negård et al. 2020) and act as a source of solace in difficult situations (Cameron-Mathiassen et al. 2022).

Hypothesis 5. *The larger the share of people in the young people's personal network who live or work in the same residential care facility, the greater their sense of belonging.*

3 | Methods

3.1 | Data Collection and Participants

The data for this study came from the research project 'The personal life of young people in residential care - StePLife'. Data were collected between May and August 2022 using an online questionnaire in a classroom setting, either in the attendance of a researcher or under the supervision of a staff member. Data were collected in children's and young people's homes (with or without internal school) and in intervention centres in 15 cantons in the German-speaking part of Switzerland. In a first step, a list of all residential child and youth care service providers in German-speaking Switzerland was generated, which included 206 organizations. They were all asked to participate in the study, of which 113 agreed. Then, all young people that fit the

study criteria were informed about the study and the conditions for participation. A total of 559 young people from 90 service providers agreed to take part in the study on a voluntary basis. All participants were informed about the study and their rights verbally and in writing. For participants younger than 14, written parental consent was additionally obtained. The study participants were required to give active consent at the beginning of the questionnaire and could withdraw from the study at any time without any consequences. Participants received 15 Swiss Francs. A total of 94 residential care facilities belonging to 90 different service providers participated in the study, which were geographically separated from one another. For this study, only cases with no missing data regarding all variables of interest were used, resulting in a sample of 393 cases. The median of participants per residential care facility was three (min. = 1, max. = 22). Table 1 shows the characteristics of the sample used for the analysis (N = 393). The sample consists of 48.6% female and 51.4% male young people. The age ranges from 11 to 18 years.

3.2 | Measurement

3.2.1 | Dependent Variable

The dependent variable 'sense of belonging' was measured using a specially developed social connectedness scale based on the belongingness scale presented by Lee and Robbins (1995).

TABLE 1 | Sample characteristics.

	$N = 393$	%
Gender		
Female	191	48.6
Male	202	51.4
Age		
11	1	0.3
12	25	6.4
13	38	9.7
14	89	22.6
15	91	23.2
16	86	21.9
17	60	15.3
18	3	0.8
Nationality		
Swiss	269	68.4
Other	99	25.2
Unknown	25	6.4
Facility type		
Children's home	163	41.5
Special school home	202	51.4
Intervention centre	28	7.1

According to Lee and Robbins (1995), a sense of belonging consists of companionship, affiliation and connectedness. While companionship and affiliation relate to dyadic relationships and specific group memberships, respectively, connectedness relates to the larger social context that goes beyond family and friends. Therefore, connectedness is in line with the personal network approach, because it considers larger and more complex configurations of individuals. The scale used in the present study thus measures people's overall feeling of social connectedness rather than connectedness to a specific reference group such as the residential care unit or family. The scale consists of six items in total, divided into the two dimensions: *connectedness* and *exclusion*. The three items on connectedness are worded positively and are phrased as follows: 'I feel close to other people', 'There are people who know me really well' and 'I am often with people I like'. The three items on exclusion, on the other hand, are worded negatively and are as follows: 'I often feel alone', 'I feel like an outsider' and 'I feel like I don't really belong anywhere'. The scale uses a 5-point Likert scale ranging from *disagree* to *agree*. The scale showed good internal consistency ($\alpha = 0.760$). The mean of all six items was calculated as the dependent variable, with the polarity of the three negative items reversed.

3.2.2 | Independent Variables

The young people's personal networks were gathered in a three-stage process. In the first step, participants were asked to read the following name generator (McCarty et al. 2019) and then to list up to 13 people: 'What people (or animals) have been important to you in the last year?' The respondents were free to define what 'important' means to them. In the second step, the participants were asked to provide the following information about the individuals listed: relationship type (e.g., mother, father, friend and pet), frequency of face-to-face contact and contact by telephone/internet and place of residence. Regarding the types of relationships, respondents were offered a total of 16 relationship categories (see Table 2). The relationship categories were kept rather general to keep the number of categories as low as possible so that the respondents were not overburdened. For instance, the categories 'mother' and 'father' includes biological, foster and adoptive parents. The category 'professionals' contains professionals from all areas, e.g., caregivers, psychologists and doctors, except for teachers, who were recorded separately. In the third step, the participants indicated which of the people listed would provide them with support if required, and with whom they regularly have stressful conflicts. The relationship with a network member can be only supportive, only conflictual or both. Using this data, we calculated the following six independent variables:

The *network size* is the number of listed network members, not counting the respondent. The network size ranges from 1 to 13.

The *share of supportive ties in the network* is calculated by dividing the number of supportive network members by the number

TABLE 2 | Descriptive statistics of network composition.

	Cited at least once in the personal network	Number and SD of relationship type per personal network	Share of relationship type in the personal network (%, SD)	Share of network members who live or work in the same residential care facility as the respondent (%, SD)
Mother	273 (69.5%)	0.73 (0.52)	13.49 (15.16)	1.40 (11.03)
Friend	258 (65.6%)	2.00 (2.17)	27.72 (27.70)	26.91 (36.86)
Father	207 (52.7%)	0.55 (0.55)	9.22 (12.04)	1.45 (11.98)
Brother	148 (37.7%)	0.52 (0.84)	7.53 (12.33)	13.90 (33.19)
Sister	146 (37.2%)	0.48 (0.76)	7.00 (11.33)	9.02 (27.90)
Animal	135 (34.4%)	0.49 (0.80)	7.12 (13.04)	8.52 (27.69)
Partner	100 (25.4%)	0.26 (0.44)	4.72 (10.15)	19.00 (39.43)
Professional	102 (26.0%)	0.49 (1.01)	6.21 (12.17)	85.68 (31.08)
Grandparent	85 (21.6%)	0.29 (0.61)	4.04 (10.40)	0.00 (0.00)
Other relative	59 (15.0%)	0.28 (0.78)	3.07 (8.48)	3.39 (18.25)
Roommate	55 (14.0%)	0.20 (0.58)	2.74 (8.18)	92.00 (26.56)
Others	54 (13.7%)	0.19 (0.61)	2.88 (9.46)	2.16 (13.75)
Classmate	30 (7.6%)	0.13 (0.53)	1.87 (8.46)	48.33 (49.97)
Teacher	17 (4.3%)	0.06 (0.31)	0.70 (3.64)	23.53 (43.72)
Neighbour	8 (2.0%)	0.03 (0.28)	0.49 (4.18)	37.50 (51.76)
Own child	3 (0.8%)	0.01 (0.15)	0.25 (3.03)	16.67 (28.87)

Note: Mother and father include biological, foster and adoptive parents.
Abbreviation: SD = Standard deviation.

of total network members and then multiplying the value by 100. Therefore, the share of supportive ties in the network is between 0% and 100%.

The *share of conflicted ties in the network*, in turn, is calculated by dividing the number of network members with whom the respondent regularly has stressful conflicts by the total number of network members and then multiplying the value by 100. Thus, the share of conflicted ties in the network is between 0% and 100%.

To calculate the *average amount of face-to-face contact with network members*, respondents were asked to indicate how often they had met up with each member of their network in the past year on an 8-point scale from *never* to *daily*. Then, the mean of the frequency of contact between the respondent and all network members was calculated. Therefore, the value is between 1 and 8. The *average amount of telephone or internet contact with network members* was calculated the same way, but regarding contact by internet/telephone.

The *share of network members who live or work in the residential care facility where the respondent lives* is calculated by dividing the number of network members who live or work in the care facility where the respondent lives by the number of network members; then multiplying the value by 100. Accordingly, the share is between 0% and 100%. This measure considers both children and young people who live in the facility and the staff who work and/or live there.

3.2.3 | Control Variables

In addition, *age* and *gender* of the young people were used as control variables in the multivariate data analysis. Gender was calculated as a dichotomous variable, with male being the reference category.

3.3 | Analyses

The data were analysed in two steps. First, the network composition, network size and structural characteristics of the personal networks were analysed descriptively. Secondly, we performed a two-level random intercept model with maximum likelihood (ML) estimation to test how personal network characteristics predict social connectedness. Due to the nested structure of the data, a multilevel model was required.

4 | Results

Table 2 shows an overview of the young people's network composition. The first column shows the number of cases in which the relationship type (e.g., mother, father and friend) was cited at least once in the personal network. For instance, in 273 cases, at least one mother was mentioned by the respondents as an important person in their life. That is 69.5% of all cases. Overall, members of the nuclear family and friends were mentioned the most. Professionals, which include caregivers, were mentioned less frequently as important people in life. The second column

presents the average number per relationship type and the standard deviation. For example, the respondents cited 2.00 friends in their personal network on average. Friends are by far the most frequent relationship category in a network in terms of quantity. The third column displays the share of each relationship type in the personal network. For instance, on average, friends make up 27.72% of a personal network. The fourth column shows the share of network members that live or work in the same residential care facility as the respondents. For example, 85.68% of the professionals who were mentioned as important work and/or live in the same facility.

Table 3 displays the descriptive statistics on the network size and structural characteristics. The respondents cited on average 6.77 network members (network size). On average, 88.08% of the network members would support the respondents if they need support. In addition, respondents have regular and stressful disputes with an average of 18.58% of their network members. Table 3 also shows that, on average, 20.44% of the members of the respondents' network live or work in the same facility as they do. Therefore, most network members live outside the residential care facility.

Table 4 shows the results of the Pearson correlations between the network variables, which were used as independent variables in the random intercept model. The results indicate that there is little or no correlation between these variables. As shown, there is no significant correlation between network size and the share of supportive relationships. What becomes apparent, however, is that the two forms of contact frequency, face-to-face and internet/telephone, correlate positively with each other.

Table 5 contains the empty model with no predictors (Model 1) and the full model with all predictors including gender and age as control variables (Model 2). The table also contains the Marginal R^2 value of both models, which only considers the variance of the fixed effects. The intraclass correlation coefficient

TABLE 3 | Descriptive statistics of network size and structure.

	n	**M**	**SD**	**Range**
Network size	393	6.77	3.51	1–13
Share of supportive ties in the network (%)	393	88.08	19.38	0–100
Share of conflicted ties in the network (%)	393	18.58	21.90	0–100
Average amount of face-to-face contact with network members	393	5.69	1.28	1–8
Average amount of telephone or internet contact with network members	393	5.69	1.47	1–8
Share of network members who live or work in the care facility where the respondent lives (%)	393	20.44	23.87	0–100

TABLE 4 | Pearson correlations between personal network variables.

	1	**2**	**3**	**4**	**5**	**6**
1 Network size	1					
2 Share of supportive ties in the network (%)	−0.085	1				
3 Share of conflicted ties in the network (%)	−0.024	−0.154**	1			
4 Average amount of face-to-face contact with network members	−0.032	0.145**	−0.040	1		
5 Average amount of telephone or internet contact with network members	−0.255**	0.181**	0.070	0.379**	1	
6 Share of network members who live or work in the care facility where the respondent lives (%)	0.116*	−0.175**	0.063	0.257**	0.009	1

*$p < 0.05$.
**$p < 0.01$.

(ICC) indicated that 11.99% of the variance of social connectedness is explained by the level 2 units, which relate to the residential care facilities. The result shows that young people's social connectedness is positively associated with network size, the share of supportive ties in the personal network and the frequency of face-to-face and telephone/internet contact with their network members.

5 | Discussion

The aim of this study was to analyse the relationship between the personal networks of young people in residential care and their sense of belonging. The results support the basic assumption of this study that sense of belonging is related to young people's important relationships. As the descriptive results show, most of these important relationships are with people who do not live or work in the residential care facility where the young people live. While some of these relationships, such as with parents or siblings, may be strained by the processes that led to the young person's out-of-home placement, they are still important to them. This finding is important because personal networks are closely linked to one's attitudes, values, opportunities and decisions (Kadushin 2011; Widmer 2016). In the context of linked lives, it must be noted that the life courses, plans and aspirations of young people in residential care are related to the changes and decisions of their network members (Settersten 2015). These changes may have positive or negative effects on the course of the placement. This emphasizes that young people in care should not be viewed in isolation, even though they are geographically separated from important people in their lives. Furthermore, linked lives stresses the temporal dimension of relationships and thus underlines the importance of a life course perspective. In the context of residential care, this is highly relevant, as personal networks are not only important while they are living in the facility but also after they leave care, as they are an important source of support and companionship during the transition to adult life (Okland and Oterholm 2022). Research has also shown that young people's family relationships are experienced as unstable and unprepared during the transition from care, even though they rely on those relationships (Boman 2022). This underscores the importance of supporting young people in maintaining, strengthening and preparing their personal network beyond the boundaries of the residential care facility.

With regards to our five hypotheses, most of the network characteristics were significantly associated with young people's sense of belonging. Both the network size (Hypothesis 1) and the share of supportive ties in their personal network (Hypothesis 2) were positively associated with sense of belonging. On the one hand, this suggests that belonging is related to people's importance, but not necessarily to whether those people are supportive. On the other hand, the results show that the availability of support is also important, as a higher proportion of supportive relationships in their personal network is linked to a greater sense of belonging. A larger share of supportive ties indicates that young people feel supported by different types of network members (e.g., parents, siblings and friends). Research on the interplay of support from different sources during adolescence shows that they can reinforce or compensate for one another (Schacter and Margolin 2019). Support from people who belong to different groups might strengthen people's sense of belonging because they feel accepted in different social contexts.

Contrary to our third hypothesis (Hypothesis 3), a higher share of conflictual ties in the personal network was not associated with a lower sense of belonging. This result may be related to the stress-buffering role of perceived social support available through network members (Cohen and Wills 1985). Therefore, the negative effects of frequent interpersonal conflicts on sense of belonging are lessened by the provision of support by other network members. However, interpersonal conflicts, while stressful, could also be part of dealing with the out-of-home placement. This may take the form of ambivalence in personal relationships, especially with parents or siblings. The young people might perceive members of the nuclear family as a source of support, but at the same time, the out-of-home placement also leads to feelings of rejection (Biehal and Wade 1996). Research has shown that ambivalence in family networks occurs in different configurations that exhibit different patterns of support and conflict (Widmer 2016). While some configurations are associated with greater cohesion, others are related more closely to greater autonomy. These structural patterns of ambivalence might also be linked to a sense of belonging in different ways. A study by Goodman et al. (2019) has shown that violent conflict is negatively associated with belonging in contrast to negotiation-based conflict. Therefore, if the conflictual relationships in the personal network are primarily characterized as negotiation-based, then there may be no or only a minor negative effect on

TABLE 5 | Random intercept model for social connectedness.

	Model 1		Model 2	
	Est.	**SE**	**Est.**	**SE**
Fixed part				
Intercept	3.712**	0.052	2.969**	0.525
Network size			0.024*	0.011
Share of supportive ties in the network (%)			0.006**	0.002
Share of conflicted ties in the network (%)			−0.003	0.002
Average amount of face-to-face contact with network members			0.099**	0.035
Average amount of telephone or internet contact with network members			0.059*	0.030
Share of network members who live or work in the care facility where the respondent lives (%)			0.001	0.002
Gender (ref. male)			−0.259**	0.082
Age			−0.046	0.028
Random part				
Variance Level 1 (Individual)	0.602**	0.048	0.543**	0.044
Variance Level 2 (Residential care facility)	0.082*	0.037	0.035	0.028
−2 log-likelihood	954.85		896.57	
Marginal R^2	0.000		0.144	

*$p < 0.05$.
**$p < 0.01$.

belonging. Another explanation could be that young people with a high share of conflictual relationships experience regular interpersonal conflicts as a normalized family practice (Morgan 2011). Hence, the proportion of conflictual relationships does not have the expected negative impact on young people's sense of belonging because they do not imply feelings of exclusion.

Consistent with our fourth hypothesis (Hypothesis 4), frequency of contact with network members was positively related to the sense of belonging. We examined this association with face-to-face contact and non-face-to-face contact (e.g., on the internet or by telephone), both of which were meaningful. Contact that

does not take place face-to-face also includes the use of digital media, which is the subject of a critical debate in child and youth residential care (Good and Mishna 2021). However, with regard to belonging, the positive aspects of digital media are emphasized by the results of the present study. For instance, the results show that more than two-thirds of the young people's friends do not live with them. Hence, digital media are important for maintaining these friendships. Indeed, research has shown that adolescents' casual exchanges with friends via digital media are related to their sense of belonging (Davis 2012). In addition to friends, the results show that, overall, about four-fifths of the network members do not live with them in the residential care facility, further underscoring the value of digital media.

Contrary to our prediction, a higher share of personal network members who live or work in the same residential care facility as the young person living was not associated with a greater sense of belonging (Hypothesis 5). Sense of belonging builds on the principle that people have the right to choose to whom or what they want to belong (Mahar et al. 2013). It can be argued that the relationships young people form in residential care are not freely chosen. Although such relationships may be important within the residential care facility, they might not have the same importance in terms of young people's larger social context. Another explanation could be that the young people assume that relationships in care homes tend to be of shorter duration and therefore do not have the same significance for their sense of belonging. Research has shown that placement instability is a barrier to the development of a sense of belonging (Skoog et al. 2015). The same study also concluded that young people's difficult relationships with their parents affect their relationships in the residential care facility, making it difficult for them to develop a sense of belonging (Skoog et al. 2015). Mahar et al. (2013) point out that a sense of belonging depends not only on social factors but also on spatial factors. It could therefore be that young people build important relationships in the residential care facility, but that the place makes it difficult for them to develop a sense of belonging because they are not there voluntarily. In the present study, young people's sense of belonging was measured in a general sense and not only in relation to the residential care facility, which could also explain why this hypothesis (Hypothesis 5) was rejected. These findings highlight the need to consider young people's entire personal network, including relationships that extend beyond the boundaries of the residential care setting, when considering the question of belonging.

6 | Limitations

This study has some limitations that should be addressed. First, the collection of information about the personal networks in this study included only the relationships between the young person and its network members, but not the relationships between the network members themselves. Hence, many structural dimensions of personal networks, such as support and conflict density, the centrality of young people in their network or the number of components of their networks, cannot be calculated with the data from this study (McCarty et al. 2019). These indicators would be of great use to better understand how young people are affected by structural disadvantages (Scott 2017). Second, we did not include the dimension of time in our random intercept

model. Developing a sense of belonging takes a relatively long time. Hence, it can be assumed that young people who have been living in a residential facility for a longer time are more likely to develop a higher sense of belonging. Therefore, future research should consider the dimension of time. Third, we operationalized young people's non-face-to-face contact with network members through the frequency of telephone and internet-based contact. Although this study shows the importance of those non-face-to-face contacts, this rough operationalization did not allow us to capture in depth the increasingly important role of social media in people's sense of belonging.

7 | Conclusion

The results of this study provide important implications for residential child and youth care. The results indicate that it is crucial to recognize the larger spectrum of meaningful relationships that young people have, as they matter significantly for their sense of belonging. When young people enter residential care, they are embedded in a personal network that carries a history of meaningful experiences. While some relationships might end, others will continue and outlive the placement. Hence, caregivers must respond thoughtfully to demands that are associated with belonging during the placement. The results show that a large share of the relationships go beyond institutional boundaries. Although young people are likely to make new connections during their stay that contribute to a sense of belonging, the maintenance of the whole personal network is of high importance. To promote the maintenance of important relationships between young people and people outside the residential care facility, service providers could make more use of their relationships with organizations such as schools or leisure facilities (Blanken et al. 2023). In this regard, the results imply that caregivers should help young people to come into frequent contact with their personal network members. Digital communication tools could play a key role in ensuring a high frequency of contact with network members outside of residential care. This could be achieved by service providers engaging young people in conversations about the role of digital communication in their lives, including how it can hinder or enhance their sense of belonging (Good 2023). Although most of the young people's important relationships are outside the residential care facility, relationships within the institution should also be fostered because they spend a lot of time there. In this regard, building trusting relationships with adults (Moore et al. 2018) as well as peers are two important domains (Roche 2019), especially for those who do not have many other important relationships, but also for those who stay for a longer time in the facility. Furthermore, caregivers should also help young people to maintain the size of their network and compositional heterogeneity, and a broad range of support in their network. One challenge for caregivers is that fulfilling the need to belong might interfere with other placement goals, due to possible negative normative influences of the young person's personal network. However, in a long-term perspective, caregivers need to help young people to develop their personal network according to their needs. Once young people leave care, it is crucial to maintain these important relationships to minimize abrupt drops in their sense of belonging and loss of social support.

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