

AIM AND MOTIVATION OF THIS DISSERTATION

The onset of adolescence is a challenging period in life, given that adolescents face a myriad of social, cognitive, and biological developments (Steinberg & Morris, 2001). Adolescents usually do not confront these challenges on their own, but seek help from their social environment. As adolescents develop a desire for autonomy from authority figures, such as parents or teachers, the role of peers in shaping their daily lives becomes larger (Allen & Land, 1999; Berndt, 1982; Larson & Richards, 1991). As such, the role of peers in the provision of support becomes more important (Helsen, Vollebergh, & Meeus, 2000; Hombrados-Mendoza, Gomez-Jacinto, Dominguez-Fuentes, Garcia-Leive, & Castro-Travé. 2012; Del Valle, Bravo, & López, 2010).

The aim of this dissertation was to examine the role peers play in adolescents' help networks. Knowledge on this topic is quite limited: Previous research has primarily viewed help as an individual outcome and focused on explaining which adolescents tend to *give* help. However, it has been largely overlooked which adolescents typically receive help, who helps whom, and what are the consequences of giving and receiving help for adjustment. Moreover, looking at research examining the role of peers in adolescent development, the majority of studies take interest in the negative aspects of the peer context, such as the role of peers in adolescent risk-taking behaviors.

This dissertation adds to previous research by conceiving of the peer context as a positive social environment with potential beneficial effects for adolescent development. Specifically, I focused on the peer context as context for the exchange of help, benefitting from a social network approach in which help is viewed as a social relationship instead of an individual attribute. Asking a large sample of early to mid-adolescents about their helpers in the classroom (*'who helps you with problems [for example, with homework, with repairing a flat tire, or when you are feeling down]?'*) allowed me to answer questions on the identity of help givers and receivers (chapter 2), on the interplay of help with friendships (chapter 3), on help network characteristics on the classroom level (chapter 4), and on the consequences of help for adjustment (chapter 4 and 5).

In the following, I will present a short summary of the main findings as well as integrate the results of the four empirical chapters. I will additionally discuss the strengths and contributions of this dissertation, and address possibilities for future inquiry into help in adolescence. Finally, I will present an overview of some practical implications.

SHORT SUMMARY OF THE MAIN FINDINGS

CHAPTER 2: WHO HELPS WHOM?

In this chapter I focused on the effects of individual characteristics (i.e., sex, academic achievement, depressive symptoms, and peer status) on receiving help and giving help, and on similarity between helpers. I found that depressed adolescents and rejected adolescents were less often mentioned as helpers, and that rejected adolescents and

low achievers indicated to receive help more often. Furthermore, findings suggested that adolescents prefer help relations with similar others with regard to sex, academic achievement, depressive symptoms, and peer status.

CHAPTER 3: INTERPLAY OF HELP AND FRIENDSHIPS

In this chapter, the characteristics of help networks versus friendship networks and the interplay between these networks was examined. The latter was done by examining how one-sided and mutual nominations in the help network were related to nominations in the friendship network, and vice versa. Results illustrated that friendship and help networks show some structural network similarities (e.g., a tendency to nominate a selective set of classmates, and tendencies towards reciprocation and group-formation), but further inspection revealed that the extent to which some tendencies were expressed were stronger for friendships than for help relations: Students tended to nominate less helpers than friends, and tendencies towards reciprocation and group-formation were weaker in help networks. Moreover, friendship and help networks only partly overlapped; not all friends are helpers, and not all helpers are friends. Longitudinal multiplex social network analyses showed that mutual versus one-sided help was important for the maintenance of friendship, but not for the initiation of friendship, and that particularly mutual friendships provide a context in which help takes place.

CHAPTER 4: CLASSROOM HELP NETWORKS, INDIVIDUAL NETWORK POSITION, AND ACADEMIC ACHIEVEMENT

In this chapter I examined the structural characteristics of classroom help networks, the position individuals take up in this network, and their associations with academic achievement. Achievement was lower in classrooms where help relations were unequally distributed. The number of help relations (density) or the extent to which help was clustered in groups (segmentation) were not associated with achievement. Furthermore, results seemed to suggest that individuals who were more centrally positioned in the help network showed higher achievement, but the number of help relations they had was not related to achievement. Interestingly, classrooms varied strongly on network dimensions, and networks that would theoretically be expected to be most beneficial for achievement (with high density, few isolates, high equality, and low segmentation) were uncommon.

CHAPTER 5. CONSEQUENCES OF HELP FOR DEPRESSIVE SYMPTOMS

In chapter 5 I examined processes of social influence on depressive symptoms emerging from help relations of adolescents with their classmates. Specifically, I expected that depressive symptoms ameliorate when one's helpers exhibit less depressive symptoms, but may worsen if one's helpers are depressed. Results suggested that depressed adolescents initiate and terminate help relations more often, and that depressed adolescents are more often maintained as helpers. Giving help decreased depressive symptoms. Unexpectedly, one's depressive symptoms decreased if one's helpers had

higher levels of depressive symptoms, suggesting a downward comparison effect.

WHAT ARE THE ANTECEDENTS OF HELP?

In this dissertation, a first aim was to examine predictors of involvement in giving and receiving help. In the following subsection, I will shortly address the questions *who gives help*, *who receives help*, and *who helps whom* based on the findings from my empirical chapters, followed by a conclusion.

WHICH ADOLESCENTS ARE TYPICAL GIVERS AND RECEIVERS OF HELP?

In general, I found that experiencing problems and exchanging help was quite common. More than half of all SNARE participants reported on at least one ‘unpleasant event’ over a two-year period (chapter 1). Frequent unpleasant events pertained to the death or health issues of family, friends, or pets; health issues of oneself; social problems at school or within the family; and school problems. Furthermore, I found that, at each separate measurement occasion, about 77% of participants in my study reported helpers, and about 88% received at least one nomination as helper. Thus, many adolescents gave and/or received help from classmates.

Explanations for prosocial inclinations are often grounded in developmental psychology and sought in factors internal to the giver of help, such as the ability to empathize with others’ feelings and needs (Eisenberg, Eggum, & Di Giunta, 2010). I aimed to explain help with factors touching upon givers’ social context (Eisenberg, Spinrad, & Knafo-Noam, 2015), and took receivers’ perspective as well as giver-receiver compatibility into account in explaining help.

My starting point was the notion that gaining or maintaining a favorable social status among peers is an important developmental task for adolescents (Adler & Adler, 2003; Baumeister & Leary, 1995; Ormel, Lindenberg, Steverink, & Verbrugge, 1999), and that motives to (receive) help are partly rooted in considerations regarding the social status of a potential help giver or help receiver. Moreover, I argued that similarity in characteristics would predict help relations: I linked the similarity attraction perspective, arguing that similarity increases mutual understanding about each other’s problems and feelings, to a status perspective, and maintained that this understanding may decrease concerns about being rejected or ridiculed by one’s helper.

From the results of this dissertation, I can conclude that status plays a role in giving and receiving help, but that this role is quite modest: Modest correlations between adolescents’ characteristics and exchanging help (chapter 2) suggest that adolescents who are more involved in giving or receiving help are generally higher in peer status; they are deemed more popular by their classmates, are less rejected, and give and receive more friendship nominations. No causality claim can be made here. If giving and receiving help, however, were to be a consequence of peer status, this would imply that others’ social status may in part contribute to involvement in giving and receiving help, or that

individuals who are well embedded in the peer group have the social skills that may contribute to one's ability to provide or seek help.

Longitudinal associations were, however, less coherent. As for peer status, no associations of giving and receiving help with popularity were found. Also, surprisingly, rejected adolescents tended to nominate more classmates as helpers, but, as expected, received less nominations as helper. In addition, I found that characteristics which were argued to be negatively associated with status (depressive symptoms, low academic achievement), and as such negatively with giving and receiving help, were unrelated to social status in the SNARE sample, and not consistently related to giving and receiving help (chapter 2): Lower achievement was associated with receiving help, but not with giving help, and depressed adolescents gave help less often, but no association with receiving help was found. In chapter 5, I specifically found that depressed adolescents initiate as well as terminate help relations more often, explaining the absence of an association between symptoms and receiving help in chapter 2. In addition, I found that depression contributes to being maintained as helper, but not to receiving new nominations as helper (chapter 5) countering findings from chapter 2. An explanation for these varying findings might be that the group of help givers and receivers was quite large and heterogeneous. This might explain the difficulty to characterize 'typical' givers and receivers. In addition, the broad formulation of the help question in the SNARE-study may have explained why giving and receiving help were not coherently related to specific skills or characteristics such as achievement or depressive symptoms, but more to general predictors of relationship formation, such as social standing (concurrently) and, as will be discussed below, similarity and general preferences to form relations.

To conclude, the role of status in predicting giving and receiving help is modest at best. In addition, it was difficult to obtain a clear image of which adolescents are typically involved in giving and receiving help based on the characteristics I examined. To gain more insight into the identity of help givers, future research might consider including a broader array of characteristics explaining giving help, such as personality characteristics (e.g., empathy) as well as cognitive factors (e.g., one's belief in the ability to help others) and characteristics reflecting the ability to help (e.g., being smart, creative, or resourceful). However, especially the identity of receivers of help needs more attention, as particularly little is known about adolescents who receive help. Research might also focus on factors relating to the (perceived) need for help or the willingness to receive help (see, e.g., Gulliver, Griffiths, & Christensen, 2010). Indeed, the finding that rejected and lower achievers received help more often suggest that they might have mobilized their peer network as they were in need of help.

WHO HELPS WHOM?

Generally, results suggested that adolescents tend to be selective regarding their help relations with classmates: They mention two to three classmates as helpers, which is typically less than the number of nominations adolescents list in other positive networks,

such as friendship (this dissertation, and see Veenstra, Dijkstra, Steglich, & Van Zalk, 2013). The findings from chapter 2 additionally suggest that adolescents tend to (receive) help (from) similar peers –specifically, to avoid help relations with dissimilar peers. I found this avoidance of dissimilarity for sex, depressive symptoms, peer rejection, and popularity, and for academic achievement for some part of the sample. This selectivity was also found at the classroom level: Students tend to cluster in small sub-groups of helpers. In addition, findings from chapter 5 suggest that, at least for depressive symptoms, similarity is particularly salient for the maintenance of help relationships, but is not a ‘selection criterion’ on the basis of which adolescents establish new help relationships. This can be explained by the notion that depression, as opposed to sex, is not clearly observable, and may as such not play a role in the establishment of new relations (see Van Duijn, Zeggelink, Huisman, Stokman, & Wasseur, 2003). This finding emphasizes the importance of distinguishing between newly created relations and the maintenance of existing ones when assessing the role of selection similarity.

The finding that students tend to prefer help relations with similar others has to be nuanced. That is, not only a preference for similar others but also influence may play a role in similarity of help relations. The first process, which was the focus of my analyses in chapter 2, refers to the notion that individuals tend to prefer relations with similar others (McPherson, Smith-Lovin, & Cook, 2001). The second process refers to the notion that individuals assimilate to the individuals they are connected with (Friedkin, 1998), which was the focus of my analyses in chapter 5. Both processes might result in the same outcome: Similarity in behaviors and characteristics between affiliated individuals. To more clearly disentangle these two processes, future studies should control for influence when studying selection and vice versa.

The results regarding who helps whom made clear that results on the individual level are more meaningful if the higher, dyadic level is taken into consideration. That is, results suggested that individuals are not helpful towards just anyone, suggesting that giving and receiving help depend on factors that reach beyond the individual. As such, help should not simply be seen as an individual, invariable characteristic, but as behavior that involves others with characteristics that matter. Taking into account the embeddedness of individuals in help relations may provide a more consistent and complete image of the mechanisms underpinning help, and does justice to the notion that help involves two (or even more) individuals.

WHO HELPS WHOM? HELP AND FRIENDSHIPS

The general tendency to be selective regarding the exchange of help was also reflected in findings regarding the overlap of friendships and help relations (chapter 3). That is, the tendency to exchange help was higher within than outside friendships. In particular, adolescents were more often helped by mutual friends than by non-friends or non-mutual friends. This was expected, and consistent with the notion that help is an important feature and expectation of (mutual) friendship (Hall, 2012; Hartup & Stevens, 1997). I

also found, however, that help was quite prominent among non-friends, and that help preceded friendship. I argued that characteristics that are typical of (mutual) friendship, such as genuine regard and trust contribute to the tendency to help. Whereas these characteristics are typical for friends, they may also be ascribed to classmates who are not regarded as friends. For example, peers' perceived trustworthiness may increase if their general status reputation, or their reputation for helping, is positively evaluated by classmates. My findings on similarity (chapter 2) may also explain why help would take place outside friendships: Similarity fosters identification and the ability to empathize with the other (Nadler, 2016; Tajfel & Turner, 1979) which may in turn facilitate help-giving. In addition, adolescents may more readily assume that someone is trustworthy if this person has similar characteristics (Singh et al., 2015), stimulating help-seeking behavior from similar rather than dissimilar classmates.

I also found that even within mutual friendships, help is not always present. Thus, adolescents mention some classmates as friends, but these friends were not always salient to them as helpers. I argued, amongst others, that help may be a less important feature of some friendships, such as the friendship between boys (Berndt, 1982; Bukowski, Newcomb, & Hoza, 1987; Hall, 2011); or that adolescents maintain friendships with different goals: Some friendship bonds are intimate and intense, whereas other peers are primarily befriended to hang out with and have fun. Of course, seeking help from friends may also depend on one's need for help with some adolescents not making use of classmates for help, but given that the vast majority of adolescents indicated to have received help, this is likely not the only explanation.

Thus, although help was found primarily within friendships, chapter 3 has also shown that help is not as inherent to friendship as has been suggested by the literature. More research is needed to identify friends who are not helpers, and helpers who are not friends.

STRUCTURAL CHARACTERISTICS OF HELP RELATIONS

A new insight provided by this dissertation is that help may be explained not only by individual characteristics or relations, but that help relations also exist because of the presence of other help relations in the network, pointing at the relevance of structural network effects. Although this was not the focus of this dissertation, I showed across all chapters that individuals were more likely to receive help from classmates they helped (reciprocity) and to receive help from helpers-of-helpers (transitivity, group-formation).

Descriptive analyses provided more insight into how help networks can be further characterized, also in comparison to other positive peer relations. I expected reciprocity rates to at least resemble reciprocity rates of other positive networks, as receiving help may induce a feeling of indebtedness, or an obligation to return help (Ackerman & Kenrick, 2008; DeCooke, 1997, Uehara, 1995). As for transitivity, it has been argued that indirect connections (e.g., the helpers of one's helpers) are deemed more trustworthy than random others (Coleman, 1988). As trust is a salient precondition for seeking help from

a particular other, I also expected transitivity rates to resemble those of friendship and liking. However, it surprisingly appeared that tendencies towards nominating classmates as helpers, to reciprocate help nominations, and help relations to cluster in groups were weaker in help networks compared to friendship and like networks (Huitsing et al., 2012; Veenstra, et al., 2013). Apparently, the antecedents of help versus other positive relations differ. I argued in chapter 2 that there are presumably more preconditions necessary for help than for friendship and liking. For example, the level of reciprocation may be lower because some students might not be able to reciprocate help (i.e., they lack the skills or knowledge to help), or students may not approach helpers-of-helpers if they are not suitable helpers for the focal adolescent.

These differences were also visible at the classroom level. That is, in classrooms in which the tendency to (mutually) help was high, the tendency to (mutually) befriend was not necessarily high (chapter 3). This is surprising, as one would expect characteristics of particular classrooms, such as classroom atmosphere or behavioral norms, to give rise to friendship and help equally. Apparently, classrooms may provide a foundation for friendship but, at the same time, not for help, or vice versa. Perhaps, in classrooms with a high focus on academic success rather than engaging in close social relations, students may be less inclined to befriend, but may still help their peers move forward academically. In short, these findings suggest that preferences for engaging in help relations and the (resulting) network structure differ from those of other positive relations, and that it may be worthwhile to further investigate help as a distinct social relationship to better understand the role of peers in adolescents' network of helpers.

STRUCTURAL CHARACTERISTICS OF THE CLASSROOM HELP NETWORK

Viewing help as a phenomenon that also manifests itself at higher levels than the individual or dyad allowed me to examine help at the classroom level. Specifically, I sought to examine how classroom help networks can be characterized. I found that classrooms varied with respect to the number of help relations, the extent to which help relations were equally distributed over students, and the extent to which the help network was segmented (i.e., clustered into sub-groups). Also, classrooms varied with respect to how these dimensions coincided: Classroom help networks showed diverging network patterns, suggesting that not only individual or dyadic characteristics may predict tendencies to help, but also aspects of the wider classroom social setting. The findings seem to be in line with previous (scarce) research noticing wide variation between classrooms regarding inequality or segmentation in adolescents' networks of positive social relations (Ahn & Rodkin, 2014; Babarro, Díaz-Aguado, Martínez Arias, & Steglich, 2017; Baerveldt & Snijders, 1994; Cappella, Kim, & Neal, 2013). There are several explanations that may clarify this variation between classrooms. These explanations were not discussed in chapter 4, but deserve consideration in future studies into classroom helping.

First, person-environment fit theory has been often used to explain behavioral variation in social settings, and maintains that individuals behave in accordance to what is

considered acceptable or normative for the social setting in which the individual resides, such as classrooms (Wright et al., 1986). Behavior is normative if it is displayed by the majority of the group (descriptive norm), or by influential, high-status group members (status norm or norm salience) (Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000; Veenstra, Kreager, & Dijkstra, 2018; Wright, Giammarino, & Parad, 1986). However, it has been argued that this reasoning does not hold for prosocial behavior, such as help, as this behavior is consistently related to peer acceptance and thus normative in any group setting (Stormshak, Bierman, Bruschi, Dodge, & Coie, 1999; Wright et al., 1986). As such, according to person-environment fit theory, the tendency to help should be quite comparable among classrooms, and help should thus be 'omnipresent'. Yet, a recent study showed that the evaluation of prosocial behavior varies among classrooms (Dijkstra & Gest, 2015), and that the tendency to display prosocial behavior is stronger when other classmates or influential classmates behave prosocially (Laninga-Wijnen, Harakeh, Dijkstra, Veenstra, & Vollebergh, 2018). This dissertation also suggested that, although givers and receivers of help generally seemed higher in peer status (chapter 2), help was not common in any social setting (chapter 4). Variations in the social acceptability of this behavior may be an important contextual factor explaining variation. However, the idea that adolescents behave 'just' in response to social norms overlooks the notion that, as argued in chapter 4, adolescents additionally need to trust peers and be willing to self-disclose to peers for help to flourish in classrooms.

An approach that better corresponds to this notion pertains to the so-called classroom goal structure (Meece, Anderman, & Anderman, 2006). In literature on academic goals, a distinction is made between mastery goals and performance goals (Pintrich & Schunk, 2002). In short, mastery goals pertain to an individuals' focus on self-improvement of ability, whereas performance goals pertain to a focus on ability improvement relative to others. Different goal orientation types have been linked to differences in academic success, but are also related to social processes in the classroom. Specifically, a focus on improvement relative to others is found to inhibit students' tendency to seek help from peers on academic tasks (Middleton & Midgley, 1997; Roussel, Elliot, & Feltman, 2011; Ryan, Hicks, & Midgley, 1997; Shim, Kiefer, & Wang, 2013). Similarly, Roseth, Johnson, and Johnson (2008) showed in their meta-analysis that the presence of positive peer relations is attenuated in classrooms in which students hold an individualistic orientation (and believed that they could improve their ability regardless of others' success in ability improvement). Students in classrooms characterized by such a competitive and individualistic atmosphere are likely to be less open and trustworthy, and more focused on personal rather than other's well-being, hampering the establishment of help relations.

However, it is unclear who determines these collective goal orientations. Research found that teachers have a key role in shaping classroom goals, as they may or may not emphasize the importance of achieving high grades, or focus on either individual or group activities (Meece et al., 2006). However, the role of teachers in my research was

likely small, as students were being taught by different teachers depending on the course. As such, students in classrooms were confronted with different ways of teaching almost every hour. Thus, students in the classroom likely developed a collective goal orientation independent of their teacher, perhaps under the guidance of visible, influential peers.

Another approach that aids in explaining network differences, and has been briefly touched upon in chapter 4, refers to the ‘self-organizing’ capacity of social networks (Robins, 2015). This pertains to the notion that preferences for relationship formation at the individual level result in certain network structures at higher levels. Indeed, individual level tendencies to reciprocate help nominations, and to mention helpers-of-helpers as one’s own helper (chapter 2, 3, 5) may have unintentionally contributed to the segmented network structure I found at the classroom level (chapter 4). These seemingly universal principles may nonetheless result in diverging classroom network patterns – as my results demonstrated, not all classrooms are segregated into groups of similar peers to the same extent. Network ecology theory (McFarland et al., 2014) emphasizes that features of the classroom context may amplify or attenuate preferences for relationship formation and, in turn, contribute to variation in characteristics of the larger network. In line with this, findings from chapter 2 demonstrated that individual tendencies towards nominating others as helper, reciprocating help nominations and nominating helpers-of-helpers as own helper vary over contexts. A contextual characteristic that pertains to variation in trust and openness, and may thus be relevant for explaining variation in help networks, is heterogeneity in the characteristics of students in a classroom (McFarland et al., 2014). First, it is argued that heterogeneity increases the opportunity for social segregation; the more common a certain attribute is (e.g., some classrooms were characterized by high percentages of Dutch or female students) the less relevant this attribute becomes for social selection. More importantly for help, however, is that heterogeneity of attributes in the social context may raise concerns and uncertainty about others’ trustworthiness (McFarland et al., 2014; McPherson, Smith-Lovin, & Cook, 2001), amplifying the tendency to limit help interactions with others with whom one can more readily identify, that is, similar others (Nadler, 2016). Thus, heterogeneity may reduce feelings of trust and openness, resulting in segregated and possibly low-density help networks in which peers establish help relations with a selective set of similar classmates.

In sum, the differences I found between classroom help networks are less likely explained by traditional theoretical explanations referring to contextual processes, such as norms and teaching style. Moreover, classrooms showed very diverging network patterns, suggesting that every classroom has its own help network dynamics. Network ecology theory seems a promising avenue for future research into explaining these intricate differences: This approach acknowledges the complex interplay between individual relationship formation preferences and the role of the social context in shaping these preferences, and their subsequent impact on classroom level social structure.

CONCLUDING REMARKS ON THE ANTECEDENTS OF HELP

To summarize: It is challenging to obtain a clear image of typical givers and receivers of help, but by conceiving of help as social behavior, I demonstrated that individuals are selective with regard to their help relations: They tend to avoid to (receive) help (from) dissimilar others, and help more often takes place within rather than outside friendships. In the introduction of this dissertation, I explained that prosocial behavior (such as help) has been defined as behavior intended to benefit (relations with) others (Dovidio, Piliavin, Schroeder, & Penner, 2006; Eisenberg et al., 1999), but results from this dissertation suggest that it is behavior intended to benefit *particular* others. Furthermore, my results regarding the overlap between friendship and help and the structure of the help network at the classroom level called into question the supposed omnipresence of help within friendships and over classrooms. More insight is needed regarding which friends are also identified as helpers and which are not, which peers other than friends are helpers, and what individual and classroom characteristics may predict the wide variation in classroom help network structure. Generally, future research should take into account that help involves at least two individuals, and should always take into account *to whom* help is given when studying giving help, and *from whom* help is received when investigating receiving help. In doing so, more information is gathered as to which adolescents typically give and receive help, but also about the mechanisms underpinning giving help to or seeking help from *specific* peers, and about how help exchange on the dyadic level adds to our understanding of the emergence of help networks at the classroom level.

WHAT ARE THE CONSEQUENCES OF HELP?

Next to examining the antecedents of help relations, the second aim of this dissertation was to examine consequences of help. I examined effects of giving and receiving help at three levels – the individual, the dyad, and the classroom, on three outcomes – friendship, academic achievement, and depressive symptoms. To examine the consequences of help, I draw on the results from chapters 3, 4, and 5, in which I examined the interplay of friendship and help, the consequences of the structure of help networks and individuals network position on academic achievement, and the effects of help on depressive symptoms, respectively. I also draw on findings of chapter 2, where I discussed associations of giving and receiving help with rejection and popularity. This section will be concluded by some remarks on the consequences of help.

HELP AND SOCIAL EMBEDDEDNESS

As touched upon when discussing typical givers and receivers of help, I found some indications in chapter 2 that givers and receivers were generally better socially embedded in the peer group; not only did they give and receive more friendship nominations, they additionally seemed to be less rejected and more popular among peers. It was not entirely clear whether this social embeddedness in the peer group was a precursor or consequence

of help interactions. For rejection and popularity, longitudinal associations did not provide a decisive answer. For friendship, however, it appeared that help contributes to the initiation and maintenance of friendship (chapter 3): Indeed, adolescents were more likely to start new friendships and maintain friendships under conditions of help. I also took into account the notion that help can be mutual or one-sided, and found that particularly mutual help contributed to the maintenance of friendship. Interestingly, however, I found some indication that mutual help hampered the formation of new friendships. The combination of mutual help without any form of friendship was exceptional, however. As such, I suggested that it is not normative for peers to engage in intense, mutual help relations before having established friendship, that is, before knowing each other or feeling affection for each other. Thus, help may positively contribute to becoming friends, or positive peer relations in general, but perhaps only if it takes a form that matches with the pace in which positive relations are established: Becoming friends, for example, is a gradual process, and help may be especially beneficial for friendship if it runs parallel with the level of intensity (e.g., liking, intimacy) of the friendship.

I was surprised to find that both giving and receiving help were positively associated with friendship and social status. Although I expected that helpers were accepted among their peers, I assumed that receiving help, as an indicator of dependency and lack of knowledge or skills, would compromise one's peer status. It was encouraging to find that receivers of help were socially accepted and that seeking help was associated with the initiation and maintenance of friendships. This might indicate that experiencing problems and seeking help is quite common and that adolescents will not face social repercussions, such as decreased popularity, rejection, or friendlessness, when seeking help from their classmates. Previous research has argued that seeking help triggers worries about adolescents' own and other's perception of their social status among peers (e.g., Bohns & Flynn, 2010; Nadler, 2014, Ryan, Pintrich, & Midgley, 2001) and that this is an important barrier to seeking help. These worries are, however, not justified based on findings from this dissertation about help-seeking in the classroom context.

HELP AND ACADEMIC ACHIEVEMENT

As this dissertation focused on help in the classroom context, I examined associations of help with an outcome relevant to this context - academic achievement. I expected better achievement among adolescents who were not isolated from the help network, who reported a high number of helpers and who occupied a central position in the help network. I found that the number of helpers students report was neither beneficial nor detrimental to students' academic achievement (chapters 2 and 4). Isolation from the help network (i.e., not receiving nor giving help) was also not associated with achievement (chapter 4). However, students who were central in the network, indicating that they could reach many other classmates through few intermediate help relations, seemed to show higher achievement. In addition to the association of individual network position with achievement, I was interested in whether the structure of the classroom

help network would relate to achievement. I posited that a particular help network structure (high density, low segmentation, and low inequality) would be reflective of a more open classroom atmosphere where individuals like and trust each other, providing a foundation for academic learning (Cefai, 2004; 2007). Although density nor segmentation were associated with achievement, I found that achievement was lower in classrooms where help relations were unequally distributed - specifically, in classrooms where there were some individuals that reported relatively many helpers. I argued that the division of classrooms into 'haves' and 'have-nots' as regards access to help may lead to feelings of injustice or competition between students, undermining a positive classroom atmosphere, and hampering achievement.

The finding that hierarchy in the network hampers achievement replicated findings from previous research into the associations of network inequality with achievement (Ahn & Rodkin, 2014; Ahn, Garandeanu, & Rodkin, 2011; Almquist, 2011; Babarro, Diaz-Aguado, Arias, & Steglich, 2017; Cappella, Kim, Neal, & Jackson, 2013; Östberg, 2003). However, the mechanisms underpinning this association have not been explicitly tested. More broadly speaking, there is little knowledge as to why a particular network structure would be conducive to academic learning or other student outcomes. There is a need to better understand what a particular network structure means or reflects; and how this structure might play a role in creating certain social environments or climates conducive to student adjustment. In chapter 4, I touched upon the notion that networks with a certain structure (e.g., dense networks) may facilitate trust and openness in the classroom, and highlighted a recent study demonstrating that a cohesive classroom social network indeed facilitated generalized trust of students in their fellow classmates (Van den Bos, Crone, Meuwese, & Güroğlu, 2018). Other theoretical ideas regarding implications of social network structure emphasize the benefits of cohesive but interconnected subgroups in the network for the flow of innovative information and knowledge (Watts, 1999). These theoretical ideas on network implications need further development, but particularly need to be tailored to the (early) adolescent classroom context. Social network information is deemed a promising tool that aids in the development of classroom interventions, as networks explicitly lay out the social structure of the classroom. However, how networks may be used and altered by interventions needs further theoretical substantiation.

HELP AND DEPRESSIVE SYMPTOMS

Next to the consequences of receiving help on the individual and classroom level, I examined how help affects outcomes taking into account the dyadic level at which help takes place. That is, I examined how depressive symptoms develop as a response to the depressive symptoms of one's helpers. Generally, I found that depressive symptoms decrease in adolescents who are involved in giving help but that depressive symptoms are not affected by the number of helpers; and that depressive symptoms in receivers of help tend to ameliorate when one's helpers are depressed.

Thus, surprisingly, our results seemed to suggest that having helpers with

depressive symptoms is beneficial for receivers. Contrary to previous research suggesting that depressed individuals have impaired problem-solving capacities (e.g., Nezu, 1987; Waller et al., 2014), these findings suggest that depressed adolescents are actually able to help their peers overcome depressive symptoms (but see the discussion on downward comparison in chapter 5). Supporting this interpretation is the finding that depressed classmates are maintained as helper more often (chapter 5), and seem to be preferred as helpers over non-depressed classmates. As noted, depressed classmates may be more able to empathize with and understand others who experience problems, and give receivers of their support the feeling that they are being cared for and taken seriously. These findings suggest that also non-depressed adolescents benefit from receiving help from depressed classmates, and that having *complementary* rather than *similar* characteristics or behaviors is beneficial for receivers' adjustment.

Furthermore, it was encouraging to find that helping peers was associated with decreases in depressive symptoms over time. I argued that helping others might improve one's own 'productive' problem-solving skills, and that hearing about peers' problems tempers distress, because this makes helpers aware of the notion that having problems and worrying about these problems is normative and acceptable. However, I was surprised to find that receiving help was not associated with decreases in depressive symptoms, and argued that this underlines a need to further investigate adolescents' problem-solving as well as problem-disclosure skills. Knowing more about how adolescents address problems, how they communicate about their problems, and how this affects the well-being of givers and receivers of help would provide input regarding how peers may optimally support each other, providing benefits to both givers and receivers of help.

Thus, generally, my interpretation of my findings regarding social influence through help are speculative, and need further theoretical and empirical substantiation. Specifically, it needs to be examined *why* receivers are affected by their (depressed) helpers, *why* helpers are affected by the peers they give help to, and how characteristics of givers and receivers as well as the *combination of their characteristics* shape these mutual influence processes. Indeed, as noted in chapter 5, researchers usually adopt models for the co-evolution of relations and behavior to investigate influence within friendships (Brechwald & Prinstein, 2011; Veenstra et al., 2013), also regarding depressive symptoms (e.g. Giletta et al., 2011; 2012; Schaefer, Kornienko, & Fox, 2011). Surprisingly, help, having the explicit intention to elicit behavioral change, has not been researched in the context of peer influence, and it is likely that the mechanisms underpinning influence through help differ from those in friendships.

CONCLUDING REMARKS ON THE CONSEQUENCES OF HELP

By viewing help as behavior that involves not only a help giver, but also a help receiver, this dissertation does justice to the notion that the consequences of help stretch beyond the individual who helps others. Results suggest that giving and receiving help have consequences for social embeddedness in the peer network, in particular friendship;

academic achievement; and depressive symptoms. Thus, help has actual consequences, and these consequences deserve consideration by future research. As the results seem to suggest that complementarity versus similarity may play a role in improving adjustment, future research might consider whether this claim is substantiated for influence processes emerging from help regarding emotional wellbeing, but also for other outcomes relating to help, such as achievement (see also Lomi, Snijders, Steglich, & Torló, 2011). Further empirical and theoretical consideration should be given to how influence processes operate in help relations versus friendship relations; which interpersonal problem-solving and problem-disclosure strategies adolescents employ; and how characteristics of givers, receivers and their compatibility contribute to positive outcomes of help.

CONTRIBUTIONS OF THIS DISSERTATION

EXPLAINING HELP AS A PHENOMENON INVOLVING MORE THAN ONE INDIVIDUAL

A first contribution of my dissertation is that I view help as a social phenomenon, specifically as a social relationship, that involves and affects two individuals – the giver and receiver of help. I also acknowledged that help is a phenomenon that operates at the group level. I explained how this has the potential of opening up a relatively underexplored area of research, as it shifts the attention from the adolescent who helps to the adolescent who receives help, to who helps whom, and to the wider social context in which help takes place. I argued that traditional explanations of help, focusing on the abilities of the helper, should be complemented by explanations focusing on the receiver of help as well as their ‘match’, while taking into account processes pertaining to the social context in which help takes place, such as classrooms.

The suggestions I provided for further research into help relations also pertain to other interactions that involve and affect others. For example, aggressive behavior has often been studied from an individual perspective: What makes adolescents aggressive, and how is this aggression related to (later) adjustment (Fraser, 1996)? However, aggression may be directed towards and affects others. Bullying behavior is an example of aggression that involves others, and has been examined as such (e.g., by studying who bullies whom; Huitsing & Monks, 2018). Adopting this approach provided deeper insight into manifestations of and mechanisms underlying bullying, providing a solid foundation for intervention (Salmivalli, Kärnä, & Poskiparta, 2010). Interventions aimed at promoting positive social interactions may also benefit from such an approach, as will be further explained in the section on practical implications.

INDIVIDUAL VERSUS GROUP-LEVEL DYNAMICS

A second contribution of my dissertation is that I revealed that the way in which a phenomenon operates at the individual level may contrast with the way in which it operates at the dyadic or group level. As such, dependent on the level on which a

phenomenon is studied, the phenomenon may be considered beneficial or harmful for the adjustment of individuals or groups of individuals.

For example, findings from my dissertation suggested that the majority of adolescents receives help, and that receiving help is partially independent of, for example, sex, depressive symptoms, or peer popularity (chapter 1 and chapter 2). Thus, when limiting the analyses of receiving help to the level of the individual (and to these characteristics), help seems optimally organized- any adolescent receives help. However, these findings are more nuanced if the dyadic level is taken into account. Indeed, the dyadic level suggests that adolescents primarily (receive) help (from) similar others, calling into question the individual-level observation that help is optimally organized (see the remark on complementarity of helpers in the section on consequences of help). Similarly, chapter 4 showed that academic achievement is not affected by the number of helpers students report. Thus, at the individual level, network position is not relevant for academic success. However, looking at how help is organized at the classroom level, the number of helpers played a role: Academic achievement was lower in classrooms in which some adolescents were, relative to their classmates, worse off with regard to their number of helpers.

Thus, by limiting research into particular phenomena to the individual level, important facets may be overlooked. This may have consequences for understanding the phenomenon under study, but also for interventions. Based on my findings on the individual level, for example, no intervention would be necessary as the situation seems beneficial: The majority of students receives help. However, based on findings on the dyadic and classroom level, intervention might be useful for reducing segregation and inequality in help relations with potential better subsequent adjustment. Thus, to draw a complete picture of certain phenomena under study and to be able to develop appropriate interventions, researchers should take into account the wider context in which a phenomenon takes place.

DISCREPANCY BETWEEN ‘BEST THEORY’ AND ‘BEST PRACTICE’

A third contribution of this dissertation is that it showed that the way in which adolescents engage in help relations did not always correspond to theoretical ideas regarding what would be the most optimal way to engage in help relations. For example, I found that individuals tend to reciprocate help nominations and prefer to have help relations with helpers-of-helpers. In addition, adolescents prefer to (receive) help (from) others with similar characteristics, and help occurs more often within friendships than outside friendships (chapter 2, 3). Combining these insights, adolescents seem to engage with a limited set of similar, close, others regarding help relations, and are structurally as well as socially segregated with regard to help. As discussed, limiting helping interactions to similar, close others has benefits, as it ensures higher levels of trust and it smoothens communication, but similarity versus complementarity may also contribute to help not meeting the needs or ‘shortcomings’ of the receiver. Thus, whereas similarity might be

beneficial for some social relationships, negative consequences could arise in the case of help when the combination of characteristics of giver and receiver of help hinder problem solving. As such, complementarity instead of similarity might be more beneficial for help relations.

At the classroom level (chapter 4), I theorized which specific classroom level structures should be most beneficial to school well-being, and in particular to academic achievement. I argued that achievement would flourish in classrooms where students were equally and abundantly involved in help, and where help relations were widespread as opposed to concentrated in sub-groups. These classrooms would be reflective of widespread trust, openness, and lower competition. Surprisingly, these theoretically 'ideal' classroom help networks were very scarce. For example, almost all classrooms were characterized by a tendency to cluster in groups, and in many classrooms help relations were quite scarce.

Thus, considering adolescents' adjustment, there seems to be a discrepancy between how help networks naturally occur and the theoretically most beneficial structure of help networks. The question is to what extent it is desirable or justified to interfere in adolescents' preferences for relationship formation and the resulting, naturally occurring social structure. Perhaps, reorganizing classroom help relations so that students are equally involved and have help relations with a more heterogeneous set of peers is beneficial for certain outcomes. For example, it may enhance the flow of different forms of help and information throughout the network, putting students into contact with peers that have different abilities and knowledge than themselves. This may not only facilitate problem solving directly, but may also aid in practicing and advancing problem solving skills: Help across group boundaries brings you in contact with peers that potentially experience different types of problems and deal with problems in different ways. However, pushing adolescents to interact with peers that are an excellent 'helping match' while ignoring preferences for relationship formation may have negative behavioral and social consequences. As highlighted in chapter 4, Gest and Rodkin (2011) found that classrooms in which teachers strategically grouped students together to foster new friendships or create academically diverse seating arrangements were characterized by less peer disapproval of aggression, weaker peer approval of prosocial behavior, and a lower tendency to reciprocate friendship nominations. It is noted in this paper: "*Peer relationships are a powerful source of social influence on children, and are just as likely (if not more likely) to be managed ineffectively by adults than to be productively engaged*" (Gest & Rodkin, 2011, pp. 294).

This discrepancy underlines the need to continuously rethink well-established theories and update them with findings from empirical practice and to let school interventions be informed by what is *considered* to be beneficial for adolescents' adjustment as well as what feels comfortable and natural for those who are part of the context in which intervention takes place.

THE IMPORTANCE OF DESCRIPTIVE STATISTICS

My dissertation also showed that descriptive statistics revealed unexpected but interesting information that was of much aid for further interpretation of my results. In chapter 1, a description of which unpleasant events SNARE-participants experienced gave me an indication as to which problems they deal with. In chapter 2, my assumption that lower achievers and depressed youth were less involved in giving and receiving help because of status concerns was contradicted by the absence of any correlation between achievement and depression on the one hand and social status on the other hand. The descriptive network overlap in chapter 3 showed how help does not take place within any friendship, and that also non-friends exchange help. A detailed description of how classroom characteristics coincide within classrooms (chapter 4) showed what kind of help networks exist, and how theoretically 'ideal' help networks did not exist. Finally, chapter 5 suggested that adolescents influence each other's depressive symptoms through help, but the detailed depression change matrices showed how this did not hold for adolescents who most often suffered from depressive symptoms.

Thus, in each chapter, descriptive statistics played a substantial role in the interpretation of my findings, and this dissertation showed that understanding the phenomenon under study clearly benefits from a more elaborated discussion of descriptive results. I would strongly advocate to more clearly visualize and present more detailed information regarding (the distribution of) the data. In this way, a more nuanced and sometimes unexpected 'story behind the test results' may be revealed. This helps with the interpretation of results (for whom, when, and how do these results hold?), and aids other researchers in verifying and replicating scientific research.

METHODOLOGICAL CONTRIBUTIONS

As emphasized throughout this dissertation, I contributed to general research on adolescent prosocial behavior in the peer context by conceiving of help as a social as opposed to individual phenomenon, and measuring it as a social network. This dissertation showed how help relations are associated with individual characteristics and friendship, how they are embedded in a network, and how they can be analyzed.

I also added to research on longitudinal social network analysis, specifically. Over the years, there have been advances in this field of which this dissertation could make use. Using these advances, this dissertation contributed to the field in two ways. First, the vast majority of SIENA-studies responded to a call to study the influence of social relations on individual behavior while controlling for selection processes (Snijders, Steglich, & Schweinberger, 2007; Veenstra et al., 2013) in order to more reliably assess peer influence processes. However, social relations may also effect outcomes on a higher level than the individual: Indeed, using multiplex social network analyses, chapter 3 showed how social relations may affect other social relations. This approach corresponds to previous (scarce) longitudinal studies into the multiplexity of social relations (e.g., Huitsing, Snijders, Van Duijn, & Veenstra, 2014; Rambaran, Dijkstra, Munniksmma, & Cillessen, 2015). However,

these studies concerned social relations that mutually exclude one another within one dyad: It was examined how affiliation (e.g., friendship) may breed antagonism (e.g., antipathy) or vice versa. My study added to this research by demonstrating how multiple relationships may exist within one dyad, how these relations complement each other, and how affiliation may breed affiliation (see also Snijders, Lomi, & Torló, 2013). Researchers interested in the constituents of social relations and in factors contributing to relationship emergence, maintenance, and dissolution may take advantage of this approach.

Second, when studying social relations and behaviors, previous social network studies often modeled the presence of nominations in the network regardless of whether these nominations were newly made or already existing, using the evaluation function (for an exception see Kiuru et al., 2012; Laninga-Wijnen et al., 2017). Importantly, the findings from chapters 3 and 5 suggest that it is useful to distinguish between so-called creation and endowment effects. For example, the finding that similarity in depressive symptoms contribute to the presence of a relation (chapter 2) was further unpacked in chapter 5, where it became clear that similarity is only salient for the maintenance of existing relations and not for the initiation of new relations. Moreover, depressive symptoms did not contribute to being selected as new helper, but contributed to being maintained as helper. Whereas this was not possible to include in our model in chapter 5 yet, creation and maintenance effects may also be distinguished when modeling behavior dynamics, and represent increases and decreases in the behavior (see Haas & Schaefer, 2014). Future studies should more often consider whether it is meaningful to distinguish between creation and endowment parameters as opposed to modeling evaluation parameters only, as it may potentially do more justice to the complexity of network and behavioral data, and provides a more nuanced interpretation of results.

DIRECTIONS FOR FUTURE RESEARCH

From the discussion of my main findings and the contributions of my dissertation, I am further strengthened in my idea that prosocial behavior, and in particular help, should be more explicitly viewed as a phenomenon that is inherently social. This would do justice to the share that receivers of help, the dyad, the group, and the dynamics of help have in explaining help, its predictors, and its outcomes. I noted how this view opens up possibilities for further empirical and theoretical inquiry into help with specific suggestions regarding how future research should proceed. However, there are three additional important notions that need to be taken into account when studying help networks, but that could not be addressed in this dissertation.

DISTINGUISHING BETWEEN TYPES OF HELP

First, due to the general nature of the question tapping into help relations (*'Who helps you with problems, for example, with homework, with repairing a flat [bicycle] tire, or when you are feeling down?'*), I was not able to assess what type of help was being exchanged

between adolescents. As discussed in the introduction section of this dissertation, two types of help are particularly salient for adolescents: Practical and emotional support (Bergin, Talley & Hamer, 2003; Dunfield, 2014). These types of support differ in content as well as their emotional valence. Hence, adolescents are likely to differ in the extent to which they need or are able to provide a specific type of help. Using more specific peer nomination measures capturing different forms of help would allow a more detailed assessment of the types of help that are exchanged, which adolescents are typically involved in each type of help, and antecedents of who helps whom with specific issues. As emphasized in chapter 2, the preconditions for seeking or giving practical help from or to a particular peer may differ from seeking or giving emotional help. Moreover, distinguishing between types of support would give more clarity regarding what type of support is exchanged within versus outside friendships (chapter 3), and the consequences of various types of support for specific types of adjustment (chapter 4 and 5).

A methodological drawback of distinguishing between types of help would, however, be that these help networks will likely have a low density. I found that individuals mention two to three 'general' helpers in the classroom, which would likely decrease to one to two – or even zero – for specific types of support. I suspect that a low network density may result in analytical convergence problems, where deviations between simulated values of statistics and their observed values are too large (Ripley et al., 2018). For example, some network configurations may be too exceptional or too detailed to model. I ran into problems when attempting to model, for example, more detailed effects of the friendship network on the help network and vice versa. A possible solution may be to analyze networks at the school level. For example, Baerveldt and colleagues (2004) distinguished between practical and emotional support and found that pupils mentioned two to three helpers on average in the entire school. However, the assumption of actor-oriented models, as used in this dissertation, is that individuals have full information of all relations in the network when making their decisions about changes in relations or behavior. This assumption is less likely met in large school networks.

TAKING INTO ACCOUNT NEED, INTENTION, AND ABILITY

A second important consideration that needs attention when studying help networks is the intention and (perceived) need to seek help and the (perceived) ability to provide help. This dissertation gave information about the presence or absence of a help relation, but not about the process leading to this presence or absence. Absence of help could be the result of not needing help (e.g., because the problem can be solved by oneself), but also because of a low intention to seek help (e.g., because of a general negative attitude towards seeking help) (Gulliver, 2010; Rickwood & Thomas, 2012; Wilson, Deane, Ciarrochi, & Rickwood, 2005). Similarly, not being a helper may be reflective of not willing to help others, but also of not being able to help due to a lack of specific skills. Although I assessed associations of characteristics believed to reflect a need or ability to help (e.g., achievement, depressive symptoms) with giving and receiving help, I was not able to

explicitly take these underlying mechanisms into account. Controlling for these factors would enable to more reliably assess why some individuals do not give or receive help nominations, and also give more insight into why help is absent in some friendships, and explain the structure of help networks at the classroom level. However, given that the vast majority of students in the SNARE sample was involved in giving and receiving help, and given that my focus was to model general help relations as opposed to specific help interactions, I believe that controlling for these factors would not have strongly influenced the general findings.

EXAMINING DYNAMICS OF HELP

A third possibility for future studies is to further elaborate on the dynamic nature of help as a social relation. That is, studying help not as a relatively static, individual characteristic or ability ('This is an adolescent who helps'), but as a social interaction allows studying how adolescents direct their help to different others over time, and examine factors contributing to the initiation and maintenance of help relations and the emergence of help networks at the classroom level. Similar questions have been posed regarding adolescent friendships: Not only have researchers examined which adolescents typically established friendships from an individual perspective (Bowker et al., 2010; Gest, Graham-Berhmann, & Hartup, 2001), researchers also focused on friendship as social concept, addressing friendship emergence (Frank, Muller, & Mueller, 2013; Kandel, 1978) and factors contributing to the quality and maintenance of friendships (Branje, Frijns, Finkenauer, Engels, & Meeus, 2007; Bukowski, Hoza, & Boivin, 1994; Poulin & Chan, 2010). Help is as dynamic and multilayered as friendship, yet has not been studied as such. Whereas this dissertation provided first insights into this matter, further research is needed to draw a more complete picture of help as being subject to change, and as interaction that may, under certain conditions, be initiated and sustained.

PRACTICAL IMPLICATIONS

This dissertation focused on the classroom peer context in which help interactions take place. Although the peer environment plays a salient role in shaping help interactions, the results from this dissertation also pertain to teachers as they interact with their students and may as such contribute to shaping adolescents' classroom social environment (Farmer, McAuliffe Lines, & Hamm, 2011). As such, I will provide some practical implications that flow from this dissertation and that pertain to teachers' action.

On the basis of this dissertation, it still is too premature to state that a particular embeddedness in the help network or a particular help network structure has clear positive consequences. However, based on some of the findings in this dissertation and previous research, I argue that promoting help interactions in the classroom should be stimulated in general.

A way in which this could be achieved is by intervening in the help network

(Valente, 2014). As a first step towards network intervention, the network approach I took in this dissertation provides a tool for teachers to better recognize the dynamics of help relations in classrooms. Research comparing self-, peer- and teacher reports on social networks found that teachers are not always able to correctly identify which students are involved in bullying (Oldenburg, Bosman, & Veenstra, 2016), and the same holds possibly for positive peer interactions (Hamm, Farmer, Dadisman, Gravelle, & Murray, 2011). Moreover, my dissertation suggested that givers and receivers of help are not readily identifiable, and that the extent to which help occurs differs among classrooms. As such, a social network approach that explicitly lays out the structure of classroom help relations may support teachers in navigating students' help relations and intervene if necessary.

Teachers' knowledge of such social processes in the classroom is important for students, as it contributes to students' positive views of their school environment (Hamm et al., 2010; Hamm et al., 2011). Farmer (2000; 2006) explains that teachers may respond to the social network and improve classroom atmosphere in various ways. Having information about the social structure of the help network, teachers may group certain students together in order to foster the emergence of supportive relations in general. Also, valuable help interactions may be stimulated by promoting interaction among peers that have different characteristics (e.g., varying levels of achievement, status, or emotional problems) to foster problem solving.

A way in which can be intervened in social networks is illustrated by Neal (2014) in her research on network empowerment. It is argued that networks are empowered if individuals in a social setting have social relations that allow for the exchange of resources, and have equal power over (i.e., access to or control over) these resources. For help, this means that help relations are equally distributed among students in the classroom. Typically, I found 'disempowered' networks in which help relations were unequally distributed over students (see Figure 6.1), which resulted in lower academic achievement of all students in the classroom. Neal argues that, in such social networks, social relations should be formed that enable a more equal access to resources. To illustrate this, a 'disempowered network' is depicted in Figure 6.1, in which the size of the nodes represents individuals' number of helpers; their color low, medium, or high network centrality (light, medium, and dark grey; centrality as measured in chapter 4); and the lines the help nominations between individuals. In this network, individuals with 'powerful' network positions may be used to the benefit of individuals who have a position at the periphery of the network. For example, individual 9 may be asked to help individual 17, giving individual 17 direct access to a close group of helpers (students 1 to 4). In the current state of the network, it would take 17 four intermediaries to reach this sub-group. Similar efforts could be made to integrate other peripheral classmates in the help network.

Teachers' grouping or seating arrangements may, however, have negative consequences for the classroom atmosphere (Gest & Rodkin, 2011). To make sure that changes in the network are beneficial for students, teachers could discuss their seating

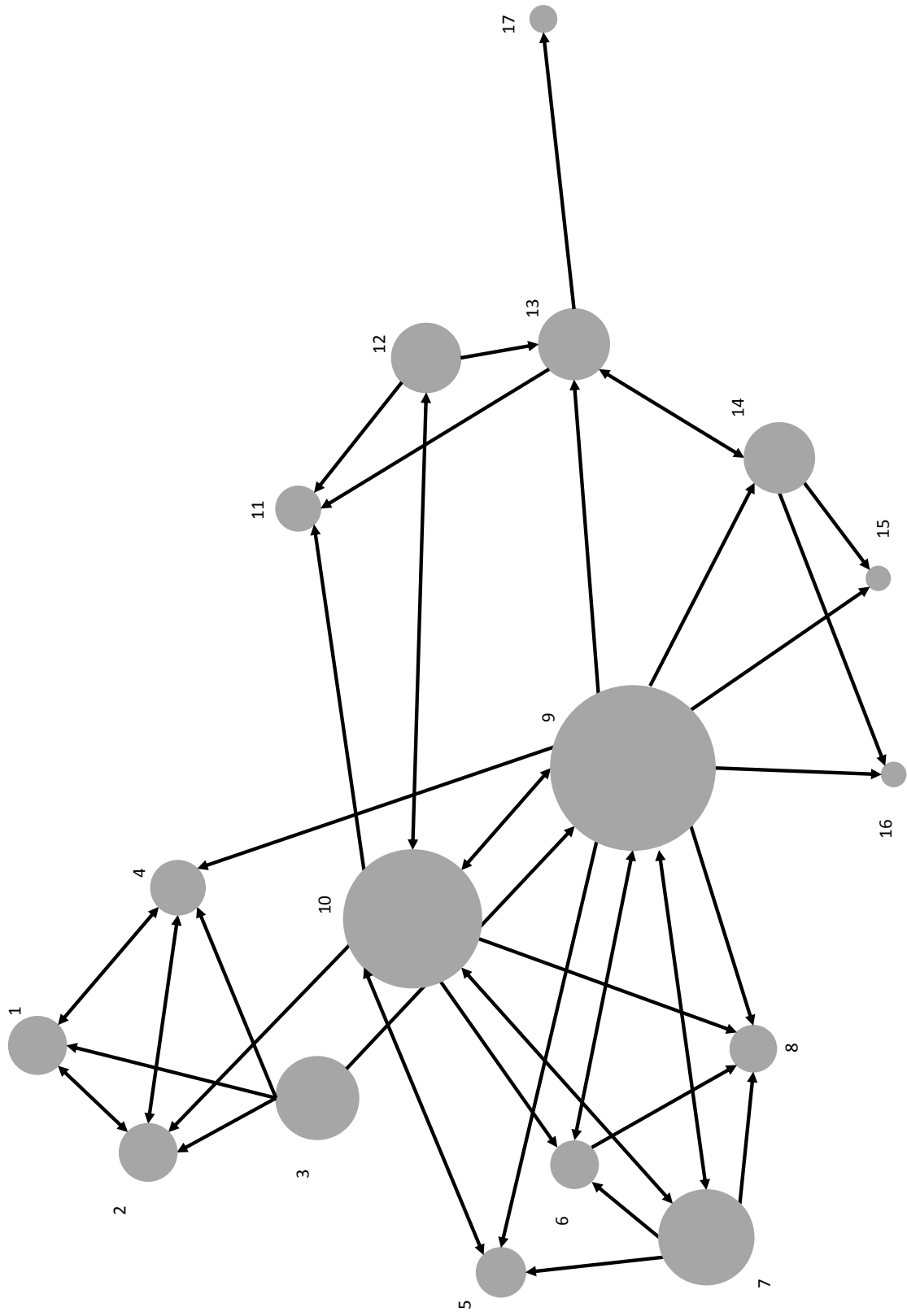


Figure 6.1. 'Disempowered' network, where some individuals have a higher number of helpers than others, and where some individuals take up a more central position than others.

or grouping arrangements with their students to be better able to also take students' preferences into account. Networked interventions are primarily suggested to benefit teachers' insight into students' social relations, but it might also be an asset to students themselves. Perhaps the state of the social network could be discussed in problematic classrooms; what do students think of the network, which members are vulnerable, which members are powerful, and how can the state of the network be altered? This may also give room to more openly discuss the type of problems classmates experience and who could be of help, possibly creating a more open atmosphere in which help can be harmlessly asked for.

Relatedly, teachers may focus on creating the basic boundary conditions that enable help to be used to all students' benefit. First, this may be achieved by ensuring a well-managed classroom in which, for example, positive behavior is reinforced, there are clear rules and expectations, and less room for aggressive behavior (Farmer et al., 2006). This may provide students with a calm and stable environment in which they can practice their positive social skills with peers, amongst which are empathy, helping, and seeking help (Luckner & Pianta, 2011). Second, it is argued that teachers may set a norm, or function as role model, for positive behaviors and relations in the classroom by having a good relationship with students themselves, and by being emotionally supportive to students (Farmer, Lines, & Hamm, 2011). Indeed, teachers' responsiveness to students' needs and having a positive emotional relation with students is associated with denser and less hierarchical positive social networks (Gest & Rodkin, 2011; Hendrickx, Mainhard, Boor-Klip, Cillessen, & Brekelmans, 2016), and with students' prosocial behavior (Hendrickx et al., 2016; Luckner & Pianta, 2011). Information about the social network could help to determine in which classrooms and for which students modeling norms for helping may be especially necessary. Moreover, it could provide information about which students may aid the teacher in setting a norm, for example, those students already actively involved in seeking help or giving help.

In sum, teachers may create boundary conditions for the exchange of help by managing the classroom and by providing examples of how to behave. This may stimulate help relations in general, and perhaps contribute to the feeling that help may be asked from anyone, not just from friends or peers that experience similar problems. The use of social networks may provide teachers as well as students with information on the social processes in the classrooms, and seems a promising tool for intervention. However, more research is needed to examine to what extent teachers may alter the network structure, and to what extent these alterations are in concordance with youths' preferences for relationship formation.

CONCLUDING REMARKS

Through my research, I aimed to move the field on adolescent social relations with their peers and adolescent prosocial behavior, specifically help, forward by conceiving of help as

a phenomenon that is inherently social. In doing so, I acknowledged that not only givers, but also receivers are involved in help; that help is a social relationship or interaction that has particular characteristics; that help is embedded in a wider social context, and that help has consequences. This approach added novel insights to the existing body of knowledge on adolescent help behavior. Amongst others, I found that experiencing problems and seeking help for these problems is common; that help behavior is selective, that is, asked from or directed primarily towards similar others and friends, that tendencies towards giving and receiving help vary over friendships and contexts; and that help has outcomes for social embeddedness, achievement, and depressive symptoms. I hope researchers will further pursue this line of research by examining the associations found in more detail, and generally by considering the early adolescent peer group as a context in which positive, supportive interactions take place.