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Friendship network characteristics and psychological well-being in late adolescence: Exploring differences by gender and gender composition

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Abstract

Aims: The aim of the present study was to examine the association between friendship networks and psychological well-being among 19-year-olds. *Methods:* The data used was a random sample of Swedish individuals born in 1990 who answered a questionnaire in 2009–2010. Friendship networks were considered in terms of three measures of emotional support. Six statements about the individual's emotional state were used to create a summary measure of psychological well-being. Gender and gender composition were included as potentially moderating factors. The association between friendship networks and psychological well-being was analysed by means of linear regression analysis (*n* = 1289). *Results:* The results indicate that males' and females' friendship networks were similar with regard to quality and trust, whereas males' networks were characterized by less self-disclosure and a stronger preference for same-gender friendships. Gender composition did not matter for the support levels. Emotional support was associated with psychological well-being but there were gender differences: females seemed to benefit more health-wise from having high-quality (and trusting) networks. Moreover, whereas self-disclosure among males was positively linked to well-being, this was not the case among females. None of these associations were moderated by gender composition. **Conclusions: In sum, friendship networks are beneficial for the psychological well-being among late adolescents, but there are some important differences according to gender.**

Key Words: *Emotional support, friendship, gender differences, late adolescence, psychological well-being, social networks*

Introduction

A large body of research has confirmed that the individual's network of social relations is important for health [1,2]. The majority of studies into networks and health have targeted the adult population whereas less attention has been paid to the corresponding associations among children and adolescents. This applies, not the least, to the near the end of adolescence and the beginning of young adulthood [3]. In most Western European countries, late adolescence is characterized by great change: this includes leaving school, and perhaps the family home, as well as entering higher education or the labour market [4]. In Sweden, it is also the case that

psychological health problems are more common in late adolescence, especially among females, than in any other age group [5]. As far as life events occurring during this period appear stressful for the adolescent, his or her social network may play a central role in providing the resources needed to encounter and counteract these stressors and protect health. While the necessary resources may be provided through different channels, it is likely that friends become increasingly important as adolescents grow more independent of their parents [6]. Although the role of parents for adolescent health should not be estimated, a focus on friendship networks may

further enhance the understanding of differences in health and well-being in late adolescence.

The present study takes its starting-point in the overarching concept of social networks, on the basis of which two dimensions – structure and content – may be identified. Previous research into the structure of social networks has, for example, focused on the number of relations individuals have, the frequency of contact or how the individual's friends are connected in networks. Studies concerned with the content of networks, on the other hand, have mainly highlighted social support. Broadly speaking, social support can be defined as the resources provided by others [7]. Besides its direct and positive influence on health, it has been shown that social support has an indirect effect that is working as a buffer against potentially harmful effects of various stressors in life [7].

Four categories of social support are generally identified [8]: emotional, instrumental, informational and appraisal. Emotional support has been defined as the availability of empathy, trust, love, and caring. It is often provided by a confidant other with whom one can talk about personal problems [1]. Instrumental support refers to the provision of concrete aid and services, whereas informational support involves the provision of advice and information. Appraisal support, finally, concerns constructive feedback and affirmation useful for evaluation purposes. The overall level and quality of these four types of support has been recognized as a fundamental component of social networks [9], with implications for health and well-being. The different types of social support are, however, difficult to disentangle and may in practice occur simultaneously. Social support has also, in empirical studies, often been conceptualized as a one-dimensional rather than a multidimensional construct. Nevertheless, each type of support refers to a variety of functions that differ in kind as well as in implications, making combined measures highly dependent on their construction. This is true both regarding the above described four major types of support but also for the support resources inherent within these broad categories.

Friendships during adolescence is typically based on reciprocity, i.e., mutual trust and liking [10], and the provisions gained through friendship networks have been assumed to primarily involve emotional support. A specific aspect of young people's friendships that has been highlighted is self-disclosure. The concept of self-disclosure involves the verbal communication to others regarding personal issues and concerns and is often assumed to reflect intimacy and emotional closeness [11]. Similar to social support in general, self-disclosure has traditionally been considered as a positive feature of individual development and socialization: individuals with high levels of self-disclosure are likely to have high-quality relationships which are assumed to protect against various stressors in everyday life [11]. However, potential dangers with high levels of self-disclosure have also been put forward [12].

It has been shown that adolescent females generally report higher levels of self-disclosure, particularly in same-gender friendships [13,14]. Simultaneously, health during adolescence and young adulthood involves a substantial gender gap in psychological health to the disadvantage of women. The concept of co-rumination has been developed as a response to this possible contradiction [15]. Co-rumination refers to the extensive discussion of personal problems within friendships and includes repeated conversations, speculating about problems and focussing on negative feelings [16]. It has been shown that co-rumination is more common among females [17]. Assuming that self-disclosure among females to a larger extent taps into processes of co-rumination, it is hence possible that the influences of self-disclosure on females' psychological well-being are not as beneficial as among males.

Many studies have identified gender differences in social networks but the findings are often inconsistent or limited in generalizability [18]. A salient finding is nevertheless the clear preference for same-gender friendships [19]. Concerning structural aspects, some studies have shown that males' networks are somewhat larger than females' networks [18], while other have found the opposite patterns [20] or no differences at all [21]. With regard to gender differences in the content of social networks, females appear to both receive and provide more social support [22], as in the previous example with self-disclosure. Despite this, males may still experience more health benefits from their social networks, especially when cross-gender relationships are present in the network [23]. In sum, the individual's gender, but also the gender composition of the network, may play an important role in the link between friendship networks and well-being.

Aim and research questions

The aim of the present study is to increase the understanding of the role of friendship networks for psychological well-being during late adolescence, with specific attention paid to gender and the gender composition of networks. This study uses three measures intended to capture the network's content in terms of emotional support and, more specifically, they tap into the dimensions of quality, trust

and self-disclosure. The following research questions will be examined:

1. Does the degree of emotional support – measured as quality, trust and self-disclosure – gained from the friendship network differ according to a) gender, or b) the network's gender composition?
2. Is the provision of emotional support through the friendship network related to the individual's psychological well-being? If so, does this association differ according to a) gender, or b) the network's gender composition?

While the number of friends is not examined *per se*, it will be taken into account in all analyses along with certain background circumstances which can be assumed to be related to adolescents' resources and health in general (i.e., parents' employment status, school marks, occupational status and civil status).

Methods

Data material

The data used for the present study was derived from a survey on social capital and personal networks within the larger study *Individual Life Chances in Social Context* (LIFEINCON). The study sample is based on a random sample of 2500 Swedish citizens born in 1990 to native parents. The respondents completed a questionnaire through telephone interviews conducted by Statistics Sweden between October 2009 and January 2010. Thus, the vast majority of the respondents were 19 years of age at the time of the interview. The response rate was 55.3 % (*n* = 1382). Non-response was primarily due to individuals not being possible to reach and to a lesser extent because of individuals being unable or unwilling to participate. The response rate was somewhat lower among males and among those who lived in metropolitan areas. It was also lower among individuals who had not finished (and were not about to finish) upper secondary school, had lower school marks and parents with lower education [24].

The interview contained questions about friendship networks. The respondents were asked to think of the five persons with whom they spend most of their spare time. In a clarifying statement, respondents were asked to think about this as "friendship". They were subsequently asked questions about each one of these persons (henceforth referred to as "alters"). A small number of alters (4%) were family members or romantic partners. Since the aim here was to capture friendship networks, these alters were not considered in the measurement of network

characteristics. Furthermore, a small number of individuals only named one alter (4%), which can be taken to indicate the existence of one dyadic relationship rather than a network. Here, only those respondents naming at least two alters were selected, of which about 44% named five alters, 24% named four alters, 22% named three alters and 11% named two alters. This distribution did not significantly differ between males and females.

Measures of friendship network characteristics

Emotional support in terms of *quality* was measured by the question: "How good do you think your relationship is?" There were five response options, ranging from "Not good at all" to "Very good". The two upper-most options were regarded as good quality and each good-quality relationship rendered one point. The measure of quality was derived by dividing the total sum of points by the number of named alters. Thus, the measure shows the proportion of high-quality relationships within the network. The second measure, *trust*, was based on the question: "How much do you trust this person?" The response options were the same as for quality and the measure of trust was calculated as the total number of high-trust relationships divided by the number of alters. Third, the measure of *self-disclosure* was based on the question: "Is this a person with whom you could discuss an important personal problem?" Each positive ("yes") response rendered one point. The total sum of points was subsequently divided by the number of named alters, resulting in a measure that indicated the proportion of self-disclosure in each respondent's friendship network. Finally, apart from the gender of each respondent, a measure of the network's *gender composition* was calculated as the proportion of individuals of the same gender in the friendship network.

Psychological well-being

The composite measure of psychological well-being is based on six statements, namely: "I'm often tense and nervous"; "I often feel sad and down"; "I'm often grouchy or irritated"; "I manage to do a lot"; "Overall, I'm happy"; and "I'm mostly satisfied with myself". The response options were: "Matches exactly"; "Matches roughly"; "Neither matches nor does not match"; 'Matches poorly"; and "Does not match at all". The measure was constructed as a summary index where the response alternatives, when they concern negative statements, score −2, −1, 0, 1 and 2, respectively. When they concern positive statements they score the exact opposite. Consequently, the summary index can vary between

−12 and 12, where higher points correspond to higher psychological well-being (skewness: −0.90; kurtosis: 3.96). A nearly identical measure has been used earlier [25]. The Shapiro-Wilk test for normality showed that the index is normally distributed. When tested in an exploratory factor analysis (EFA) with varimax orthogonal rotation, the index was shown to have reasonably high consistency (Cronbach's alpha: 0.75 for males; 0.77 for females) and the factor loadings ranged from 0.48 to 0.69 (0.45–0.63 for males; 0.50–0.72 for females). To assess unidimensionality, confirmatory factor analysis (CFA) was performed using Mplus. Four types of indicators of fit were used: eigenvalues, which should have a score below one; the Standardized Root Mean Square Residual (RMSEA), which should be below or close to 0.06; as well as the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI), which both should be close to or above 0.95. In the present analysis, the one factor solution was shown to have satisfactory fit (eigenvalue = 2.07; RMSEA = 0.09; CFI = 0.98; TLI = 0.96).

Control variables

Four control variables were included in the analysis: parents' employment status, school marks in the ninth grade, occupational status, and civil status. The first two variables were derived from register data in 2008 whereas the other two were collected from the questionnaire. Information about the father's and the mother's employment status was collapsed into two categories, of which the first consisted of those whose parents both were gainfully employed, and the second contained the remaining individuals. School marks in the ninth grade were based on the score of the individual's sixteen "top" subjects. The possible grades were: "No grade/fail" (0 points); "Pass" (10 points); "Pass with distinction" (15 points); and "Pass with special distinction" (20 points). The measure of school marks could thus range between 0 and 320. The measure of occupational status was based on the question: "What is your current occupation?" The response options were collapsed into: "Studying only"; "Working only"; "Studying and working"; and "Other". Finally, information about civil status was dichotomized into "Partner" (i.e., married or boyfriend/girlfriend) and "No partner".

Analysis

Individuals who lacked information on any of the studied variables were excluded from the analysis. This rendered a study sample of 1289 individuals. First, a correlation analysis was performed in order

Table I. Correlation analysis of the measures of emotional support ($n = 1289$).

	Quality	Trust	Self-disclosure
Males ($n = 647$)			
Quality	1	–	–
Trust	0.55***	1	–
Self-disclosure	0.30***	0.38***	1
Females ($n = 642$)			
Quality	1	–	–
Trust	0.58***	1	–
Self-disclosure	0.41***	0.50***	1

***$p < .001$: **$p < .01$; *$p < .05$.

to evaluate the strength of the associations between the different measures of emotional support, i.e., quality, trust and self-disclosure (Table I). Second, the distribution of each variable included in the study was considered, for males and for females separately (Table II). A significance test was additionally conducted to examine whether or not there were any gender differences (this test was based on linear regression analysis in order to enable adjustment for number of alters). Third, gender-specific linear regression analysis was applied to examine differences in the three support measures according same-gender composition (Table III). Fourth, the associations between the measures of network support and psychological well-being were analysed by means of linear regression analysis (Table IV). Five models were generated; all adjusted for the number of alters. The first model (Model 1) shows the "crude" associations for all independent variables in relation to psychological well-being. The next model (Model 2) includes all the support measures at the same time. In the following model, the effect of gender (in the gender-combined analysis) or gender composition of the network (in the gender-specific analysis) has been taken into account (Model 3). The final model (Model 4) additionally includes the control variables. Finally, in order to examine whether or not the associations between emotional support and psychological well-being differed according to gender or gender composition, interaction analysis were conducted: the results have been added to the lower part of Table IV. The interaction terms were calculated as each support measure multiplied with gender or gender composition. These terms were included, separately, together with all main effects (adjusting for number of alters).

Results

The degree to which the three different types of emotional support, i.e., quality, trust and self-disclosure,

Table II.   Descriptive statistics (*n* = 1289). Test for gender differences (based on linear regression analysis) is adjusted for number of alters.

	Males (*n* = 647)				Females (*n* = 642)				Test for gender differences
	Mean	Min	Max	*SD*	Mean	Min	Max	*SD*	
Quality	0.86	0	1	0.22	0.84	0	1	0.21	n.s.
Trust	0.85	0	1	0.21	0.87	0	1	0.20	n.s.
Self-disclosure	0.78	0	1	0.26	0.87	0	1	0.20	★★★
Same-gender composition	0.89	0	1	0.19	0.82	0	1	0.22	★★★
Psychological well-being	7.26	−9	12	3.32	5.59	−9	12	3.97	★★★

★★★$p < .001$; ★★$p < .01$; ★$p < .05$.

Table III.   Gender compositional differences in emotional support. Results from linear regression analysis (males: *n* = 647; females: *n* = 642). Adjusted for number of alters.

	Quality		Trust		Self-disclosure	
	Males	Females	Males	Females	Males	Females
	B	B	B	B	B	B
Same-gender composition	0.00	−0.01	0.02	0.01	−0.07	0.04

★★★$p < .001$; ★★$p < .01$; ★$p < .05$.

tend to co-exist within friendship networks is displayed in Table I. The correlation coefficients range from $r = 0.30$ to $r = 0.55$ for males and from $r = 0.41$ to $r = 0.58$ for females. The strongest correlation involves quality and trust. Furthermore, self-disclosure displays stronger correlations with quality and trust among females compared to males. Thus, there is a tendency for these types of emotional support to co-exist within networks, and that tendency seems stronger for women. The correlations are, however, of medium strength indicating that they tap into different aspects of emotional support. It should be noted that the number of alters named by the respondents showed near zero correlations with quality, trust and self-disclosure, implying that the measurement of network content is not dependent upon the number of alters (not shown in the Table).

Table II shows that friendship networks tend to be characterized by high levels of emotional support. On average 78%–87% of the network ties involve high quality, high trust and high self-disclosure. The level of emotional support is similar for men and women. Only self-disclosure seems to be a more common feature of women's friendship networks. With regard to the network's gender composition, males' networks are somewhat more homogenous in terms of gender. The table also shows that the well-being among females is lower than that among males.

Table III demonstrates the associations between gender composition and the three measures of emotional support, separately for males and females. Here, no differences by gender composition are

found. Thus, the share of same-gender alters within the network does not seem to be decisive for the level of emotional support.

Table IV presents the association between the three measures of emotional support and psychological well-being. Beginning with the gender-combined analysis, the first column (Model 1) shows that all three aspects of emotional support are positively associated with psychological well-being. For example, those with a higher-quality friendship network have a 3.59-unit higher score on the well-being index. Moreover, there are gender differences: females report worse psychological well-being compared to males (B = −1.67★★★). In the second column (Model 2), the three support measures have been included simultaneously in order to take their co-existence into account (shown in Table I). This substantially reduces the estimates for trust and self-disclosure, whereas the association between quality and well-being remains strong (B = 3.10★★★). However, the results are dependent on gender (Model 3) and statistically significant interaction effects between gender and emotional support exist. These interactions show that there are gender differences in the associations between quality ($p = .003$) and well-being, and between trust ($p = .036$) and well-being, and that these characteristics of friendship networks are more important for the psychological well-being of females compared to that of males. The control variables, on the other hand, seem to be less important for the above presented associations (Model 4). The estimates basically remain unaltered when parents'

Table IV. Friendship network characteristics and psychological well-being. Results from linear regression analysis (n = 1289).

	Psychological well-being											
	All (n = 1289)				Males (n = 647)				Females (n = 642)			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	B	B	B	B	B	B	B	B	B	B	B	B
Quality	3.59***	3.10***	2.64***	2.45***	2.07**	1.42*	1.42*	1.24	4.96***	4.05***	4.08***	3.92***
Trust	2.62***	0.61	0.60	0.62	1.69**	0.15	0.12	0.18	4.01***	1.20	1.19	1.00
Self-disclosure	1.61***	0.47	1.33**	1.12*	2.06***	1.65**	1.70**	1.51**	2.97***	0.66	0.62	0.61
Gender (ref: male)	−1.67***		−1.75***	−1.91***								
Same-gender composition					0.76		0.88	1.05	0.57		0.59	0.30
Interaction analysis												
Gender × Quality			2.75**									
Gender × Trust			2.05*									
Gender × Self-disclosure			0.25									
Gender composition × Quality							5.46				−4.35	
Gender composition × Trust							5.72				−2.97	
Gender composition × Self-disclosure							3.54				−2.67	

***p < .001, **p < .01, *p < .05.

Model 1: Adjusted for number of alters.

Model 2: Adjusted for number of alters + quality, trust and self-disclosure.

Model 3: Adjusted for number of alters + quality, trust and self-disclosure + gender/gender composition.

Model 4: Adjusted for number of alters + quality, trust and self-disclosure + gender/gender composition + control variables (parents' employment status, school marks in the ninth grade, occupational status and civil status).

employment status, school marks in the ninth grade, occupational status and civil status are taken into account. All models incorporate the number of alters within the network. It should be noted that no main effects on well-being was found for number of alters (data not presented).

The Table also presents the gender-specific analyses where the gender composition of the network has been added. Among males, there are positive associations between all the measures of emotional support and psychological well-being (Model 1), while the proportion of males within the network does not seem to be relevant for health (B = 0.76 n.s.). The simultaneous inclusion of the support measures (Model 2) shows that it is mainly the relationships entailing high-quality and high self-disclosure that are associated with well-being among males. When the control variables are incorporated (Model 4) only the association between high self-disclosure and mental well-being remains statistically significant. The interaction analysis presented in the lower part of the Table demonstrates that no interactions between the measures of emotional support and same-gender composition are statistically significant at the 5%-level.

Where females are concerned, the first column (Model 1) shows rather strong associations between the emotional support measures and well-being. The proportion of females within the friendship network is, on the other hand, not significantly related to the outcome (B = 0.57 n.s.). When all the aspects of emotional support are included simultaneously (Model 2) only the association between quality and females' psychological well-being remains strong and statistically significant. The adjustment for gender composition (Model 3) and for the control variables (Model 4) does not alter the estimates to any greater extent. From the interaction analysis, it is evident that gender composition does not interact with any of the measures of emotional support in their associations with females' health.

Discussion

The present study aimed at examining whether the levels of emotional support gained through friendship networks in late adolescence differed according to gender or the network's gender composition. First of all, it should be noted that males' and females' friendship networks were similar in terms of network structure, i.e., the number of friends. This is in line with some earlier studies [21]. Moreover, males had a stronger preference for same-gender friends; a finding which may be interpreted in terms of males' greater tendency to form homophilous networks [26].

Males' and females' networks were also equal in terms of the indicators of network content focussed on here, although males reported a somewhat lower degree of self-disclosure. This result is consistent with previous studies which have found that levels of self-disclosure are generally higher among females (particularly in same-gender friendships) whereas they are lowest in male-male friendships [13,14]. In sum, although it was originally assumed that females in late adolescence would receive more emotional support from their friendship networks compared to males, the results did not generally support such a view. Concerning gender composition, it was not significantly related to any of the three measurements of emotional support. In other words, having a high proportion of same-gender friendships in one's network is not linked to increased or decreased levels of quality, trust or self-disclosure.

Another aim of this study was to investigate the association between emotional support and psychological well-being, including whether it differed between males and females or according to the network's gender composition. At a first glance, all three measures of emotional support were positively associated with well-being among males and females alike. When these indicators were analysed simultaneously, however, only quality (for males and females) and self-disclosure (for males) reach statistically significant levels. With regard to gender differences, the interaction analysis revealed that having high-quality (and trusting) friendships mattered more for females' well-being compared to that of males. This could perhaps be explained by females' higher need for affiliative ties [27]. To recognize one's closest friendships as poorly functioning may thus create a greater distress to females, causing their health to be more profoundly affected. However, it should also be highlighted that the current study uses a rough measure of quality ("How good do you think your relationship is?"); it is not unreasonable to expect that males and females to some degree differ in terms of what they identify as being "good" or not. If females take account of aspects more closely related to health in their assessment of relationship quality, a stronger association to health would be expected. Concerning self-disclosure, the weak impact on females' well-being was partly expected: if self-disclosure among females tends to involve processes of co-rumination it could, as a consequence, counterbalance the health benefits to some extent (this was however not possible to examine empirically). Even more intriguing was the strong, positive link between self-disclosure and males' well-being. Although a vast amount of research has concluded that females' friendships are characterized by more intimacy and self-disclosure

while males' friendships rather are built on shared activities and doing things [28], self-disclosure nevertheless seems to be important for the health and well-being of males. When it comes to gender composition of the network, this was not related to psychological well-being, nor did it interact with any of the other measures of friendship networks. Thus, gender composition does not appear to play an important role for the associations studied here.

The data material used in the present study is rare in that it contains detailed information on friendship networks, in terms of both structure and content, and health in late adolescence. There are nevertheless some issues that need to be discussed.

A first set of issues concern the measurement of friendship networks. First, during the interviews, the respondents were asked about friends and acquaintances, and instructed to name five persons with whom they spend most of their time. Given the strong focus on friendships, it is reasonable to expect the levels of quality, trust and self-disclosure to be high. However, the explicit mentioning of a maximum of five friends may have caused some respondents to name more friends, and less close friends, than otherwise. This could in turn affect the level of social support in these respondents' networks, resulting in a lower level of network support when measured as the proportion of supportive ties. The adjustment for number of alters in all analyses, however, established that this did not bias the results. Second, whereas the measure of self-disclosure was dichotomous from the beginning (yes or no), the five response options for quality and trust were collapsed into two categories indicating the presence of quality and trust, respectively. While this implies a possible loss of information, it also more clearly discriminates networks that are characterized by high quality and trust from those which are not. Third, the present study restricted the analysis of late adolescents' networks to include only the most time-intense friendships and to focus on emotional support. However, it is reasonable to assume that also other persons as well as other types of support are relevant. A third issue concerns the use of self-reported measures of quality, trust and self-disclosure: self-reports are often criticized for being biased in different ways. For example, social desirability bias maintains that respondents tend to represent themselves in a favourable light [29]; which may have caused the prevalence of poor friendships to be underestimated. Negative affectivity could constitute another problem, implying that the correlation between e.g. friendships and well-being may have been inflated by some respondents' negative mood inclining them to give more negative answers through-out the interview [29]. Self-reports may nevertheless be a more relevant reflection of the consequences of respondents' situation: previous studies have found perceived support to be more influential on health and well-being than received or actual support [30].

Another set of issues concern the causal direction of the studied association. Since the present study was based on cross-sectional data, it was not possible to empirically discern whether emotional support through friendship networks had a causal effect on psychological well-being. While there are good theoretical reasons to expect this to be the case, it could still be that young people who have poor health withdraw from social interaction or have more strained relations and, hence, lower levels of emotional support. Given this complex interplay, the link between friendships and well-being may perhaps best be seen as a reciprocal process evolving over time. It should also be noted that friendships and health may have other causes: i.e., a third factor could influence both the individual's success with friends and health status. In order to take this into consideration, the present study included several background factors (parents' employment status, school marks in the ninth grade, occupational status and civil status) in the analysis. However, these factors did not explain the results. Finally, the none-response rate was relatively high and somewhat negatively selected in terms of background variables. This has most probably caused an underestimation of the strength of the association between friendship networks and psychological well-being. It should also be mentioned that the present study was based on a homogenous sample in terms of ethnicity, i.e., Swedish-born individuals with native parents. To what degree the results translate to other groups or settings needs to be empirically investigated.

Conclusions

The period of late adolescence has been under-researched within the field focussing on social networks and health. Since this period is characterized by great change and by the presence of multiple stressors, it is important to examine factors, such as friendship networks, that could potentially neutralize these stressors. Based on the results of this study, it is concluded that friendship networks, to the degree they provide emotional support, are beneficial for the psychological well-being also among late adolescents. Perhaps of particular interest are the findings related to gender. First of all, it should be emphasized that males and females seem to be more similar than different when it comes to the structure and content of their friendship networks as well as the

health consequences related to these networks. Some dissimilarity is nevertheless present: compared to females, the friendship networks of males involve less self-disclosure and are characterized by a stronger preference for same-gender friends. Moreover, males seem to benefit more health-wise from self-disclosure while females benefit more from having high-quality friendships. In future studies, such gender differences need to be recognized and further explored to increase the understanding of possible mechanisms linking social networks to health. In terms of practical implications, interventions designed to improve health and well-being in the adolescent population may target friendship networks as similarly important for males and females, while keeping in mind that different aspects of these networks could to some degree vary in significance across the genders.

Conflicts of interest

None declared.

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