

Changes in network composition and need satisfaction received from different network sectors during the first semester in university¹

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Abstract

The aim was to investigate changes in composition of students' social networks and in satisfaction of various needs by different network sectors during the first semester in university. Questionnaires were distributed to 235 first year Turkish students attending Middle East Technical University (METU) at the beginning and end of the first semester. Eighty-eight students lived with and 147 lived away from parents. Network members were grouped into three categories: family members, friends who were students at the university, and friends who were not students at the university. The results were generally consistent with the premise that social networks change with changing contexts during life transitions. More within-university friends and fewer family members and outside-university friends were cited as network members over time. Students living away from families added more new within-university friends to their networks and retained fewer outside-university friends than students living with families. Family members emerged as important providers of both affiliative and instrumental need satisfaction at the beginning of the semester but their importance declined over time. Affiliative need satisfaction obtained from both within- and outside-university friends declined and instrumental need satisfaction from outside- friends university increased over time. Females living with families cited more family members and outside-university friends than females living away from families. Females reported more need satisfaction from their families at the beginning and less need satisfaction from families at the end of the first semester when compared with males. In spite of these time related changes, network stability was also evidenced.

Keywords: network composition, network change, college transition.

The study was an attempt at longitudinal investigation of network change during youth when networks assume importance (Allan, 2001). It was conducted in Turkey, a collectivist culture, where friendships are expected to be closer and more stable and relationships with friends and families are more complementary than they are in individualist cultures (Goodwin, 1999). Specifically, changes in social networks of Turkish university students living with and away from families were investigated during the first

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semester in university. Changes were investigated with respect to network composition and satisfaction of affiliative and instrumental needs by different network sectors.

University entrance as life transition

Entering university is a major life transition and coincides with a life-stage when western society expects youth to achieve independence from parents in order to achieve personal identity (Karp & Holmstrom, 1998; Lafrehiere & Ledgerwood, 1997). In fact, centrality of some relationship identities (son/daughter, friend) are less stable than those of others types (religious and national) during this period (Cassidy & Trew, 2001).

Network studies indicate that network change serves an adaptive function during transitions and that more network change occurs during transitions than stable periods. Networks changes are related to changes in importance of various needs during transitions and to variations in the ability of different network members to fulfill these needs (Wellman, Wong, Tindall & Nazer, 1996). Friends within the same university may serve instrumental needs such as information about university life and self-evaluation, during transition to college, because they face similar circumstances. Research indicates that new within-university friends are added to networks of freshmen during the first semester while old friends may be dropped at the end of the first year (Asendorpf & Wilpers, 1998; Brissette, Scheier & Carver, 2002). Furthermore, Oswald and Clark (2003) reported that although high school best friends were retained, satisfaction from old friends declined and alternatives became more attractive during the first year in college Thus,

1. The number within- university friends will increase, whereas the number of outside- university-friends will either show no change or decline during the first semester.

Transition to university is likely to involve more changes for students living away than with parents. Those living with parents do not have to make adjustments in relation to housing, are familiar with the city, and may have more high school friends who live in town than those coming from other cities. The latter have to adjust to novel housing arrangements and to a new city as well as to being away from family and friends. Consequently, they may have to make more adjustments in their social networks and may seek substitutes for relationship partners who are away. Furthermore, additions to networks are likely to be from the new environment. In fact, students living away from families reported more frequent and intimate conversations with friends than those living with families (Hortaçsu, Oral, & Yasak, 1996). Therefore,

2. The increase in number of within university friends will be greater for students living away from than with parents.

Moreover,

3. a) More new within-university friends will be added, and b) fewer outside university friends will be retained in networks of students living away from than with families.

Need satisfaction within relationships in Turkey

Needs fulfilled by relationships may be conceptualized under two categories, namely, instrumental and affiliative needs (Rook & Pietromonaco, 1987). The importance of different needs as well as the relationships through which they may be satisfied may vary over the life cycle as well as over life transitions (Hortaçsu, Gençöz & Oral, 1995; Wellman, Wong, Tindall & Nazer, 1996). Relationships with friends and family members are both important. Friendships are especially important for self-comparison, -evaluation, and -definition during youth (Alan, 2001; Hortaçsu, Gençöz & Oral, 1995) whereas families can be depended upon for material help and emotional support during all life stages.

Dependence on the family is especially true for cultures of interdependence where transfer of attachment from parents to peers during youth is not required for self-definition (Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000). High levels of emotional and instrumental interdependence among family members and greater differentiation between family and friends with respect to provision and reception of help is reported for collectivistic as opposed to individualist cultures (Fijneman et al, 1996; Flanagan, 2001; Hortaçsu, 1997; Kaıtçiba1, 1990). Furthermore, although importance of friends for need satisfaction rises during youth, family members and friends are equally important sources of need satisfaction during this stage in Turkey (Hortaçsu, Gençöz & Oral, 1995). Thus, in collectivistic cultures, family and friends may be complementary rather than alternative sources of need satisfaction and friends may be perceived as providers of emotional rather than instrumental needs and as secondary rather than primary sources of need satisfaction. In addition, since transfer of attachment from parents to friends may not be necessary in such cultures, seeking both instrumental and emotional need satisfaction from parents rather than from friends in times of stress may be normative. Attachment literature posits that primary attachment figures may be sought during times of stress whereas secondary attachment figures may suffice at periods of tranquillity (Ainsworth, Blekar, Waters, & Wall, 1978; Rutter, 1979). Iıklı (1998) reported higher levels of stress for the beginning than for the end of the first semester among Turkish first year university students. Therefore,

4. a) Family members, as primary relationships, will be important sources of satisfaction of both instrumental and affiliative needs during the early phase of transition to university and their importance for need satisfaction will decrease over time, and b) affiliative need satisfaction from friends will increase over time.

Going away to University in Turkey

Going away to university is not an established tradition in Turkey. Relatively inconvenient conditions of dorms and the extra expenses involved as well as generally high levels of interdependence between family members usually lead to preference for universities in students' home towns. However, due to high value placed on educational attainment (Atalay, Konta, Beyazıt & Madeno lu, 1992), the quality of the institution is important. The quality of education in large cities is reputedly high.

Nonnormative transitions involve more ambiguity concerning societal and personal expectations about reactions and adaptive strategies than normative transitions. Transition to university may be a more nonnormative event for students living away than with families. However, it should be noted that individual differences with respect to relationships with parents and/or friends, love of adventure and novelty, or desire for independence may exist between students who stay with parents and those who go away to university. Whatever the reason for leaving home, students living away from families are more likely to add friends from the same university to their networks than students living with families. New additions that are likely to be low intimates often change status and become intimate friends over time (Ferrand, Mounier, & Degenne 1999). Because of similarity of circumstances and opportunity for frequent communication, within-university friends are more likely to change status than outside- university friends. This may be especially true for out-of- town students whose contacts with previous networks may be reduced. Therefore,

5. Increase in need satisfaction from friends within the university will be higher for students living away from than with families.

Research indicates that close high school friendships are generally maintained during the first semester (Asendorpf & Wilpers, 1998; Brissette, Scheier & Carver, 2002). Therefore, although, due to differences in circumstances, outside-university friends may become less functional for instrumental need satisfaction over time,

6 Affiliative need satisfaction from outside university friends is not expected to decrease during the first semester and may even increase for those living with parents.

Gender and relationships

Gender differences with respect to relationships are reported for western as well as nonwestern samples. Women define themselves more in terms of relationships (Acitelli, Rogers, & Knee, 1999; Hortaçsu, 1989); attribute greater importance to values related to relationships and to affiliative needs (Hortaçsu, Gençöz & Oral, 1995; Watkins, et al., 1998); and report closer relations, more communication with mothers, and more affiliative and instrumental contact with parents during the first year in college than males (Hortaçsu, Oral, & Yasak-Güntekin, 1996; Sorokou & Weissbrod, 2005). Females also report more

intimate friendships based on personal disclosure (Hussong, 2000; Verkuyten & Masson, 1996), engage in less instrumental strategies in relation to network composition (Stackman & Pinder, 1999), show more affection for same-sex friends and more dyadic than group/activity encounters with friends than males (Rawlins, 1992). Therefore

7) Females will include more family members in their networks and report more need satisfaction from family members than males

Last, based on the finding that continuation of high school friendships depends on maintenance of communication (Oswald & Clark, 2003) and the reports of more intimate and dyadic nature of female friendships,

8) More outside university friends are expected within female networks, especially among those living with parents.

Method

Participants

Female (77) and male (158) first year students attending English preparatory classes of METU participated in both phases of the study (264 in the first phase and 235 in the second phase). The average age was 18.17 (SD = 1.08, range 17-22). METU is one of the largest and best state universities situated in Ankara, the capital of Turkey. Unlike many other universities, its dormitories are situated on campus and provide relatively superior living arrangements. The language of instruction in METU is English and the majority of first year students (75.7% in year of data collection, 1998) attend the preparatory English classes before their freshman year. Participants were students enrolled in 14 preparatory English classes. Classes from different levels of English proficiency were selected. The number of classes selected from each level was in proportion to the total number of classes at that level. All classes were mixed with respect to major in university. The sample included 11% of students attending preparatory classes. The composition of the sample was comparable to METU freshmen with respect to gender, department, regional and educational background. Thirty-two female and 56 male students lived with parents, 42 female and 52 male students lived in dormitories situated on campus and 3 female and 50 male students lived in apartments or in off-campus dormitories.

Questionnaires

Questionnaires consisting of several sections were administered. The first part included background questions such as students' name, gender, age, hometown, department, and type of residence, and parental education. The second part asked participants to list the initials of all people whom they felt close to. Fifteen lines were

provided for names, but the instructions stated that the participants might write the initials of as many people as they wanted and that the number of people they wrote could be more or less than 15. The participants were also asked to provide information about each network member's age, gender, relationship category (parent, sibling, friend, etc.), and whether or not the person was in METU. In the third section, the students rated the perceived importance of seven needs (emotional support; love, affection, trust; consultation; having a good time; practical aid; self-understanding and personal development; exchanging goods, notes, books, clothes, and money) on 5-point scales (5 = very important, 1 = not at all important). In the fourth section, the participants rewrote the initials of each network member on the lines provided and rated the level of satisfaction obtained from each network member for each need on 5-point scales on spaces provided beside each network member (5 = totally satisfactory, 1 = not at all satisfactory). The last part of the questionnaire was used in earlier studies with Turkish and American samples (Hortaçsu, 1997, Hortaçsu, Gençöz & Oral, 1995).

Procedure

The questionnaires were distributed within English classes during the first weeks of October (Time 1). Participants were informed about the aims of the study, and were assured confidentiality. The questionnaires took about thirty minutes to complete. The questionnaires were redistributed after three months and 235 of the original 264 students completed the questionnaires at Time 2

Results

Network Composition

The average network size was 7.67 ($SD = 3.44$, range = 1-18) for Time 1 and 7.82 ($SD = 3.57$, mode = 7, range = 1-20) for Time 2. (Thus it was concluded that the number of lines provided for name generation did not influence the results). Network members were grouped under four categories: family (parents, siblings, relatives), friends who were students in METU, friends who were not students in METU; and other (neighbours, psychiatrists, colleagues, teachers). The number of family members listed was lower and the number of same sex friends was higher at Time 2 than at Time 1, Immediate Family, Time 1: Mean (M) = 2.20 ($SD = 1.28$), Time 2: $M = 1.95$ ($SD = 1.59$), $F(1,234) = 11.20$, $p < .01$; Other family :Time 1: $M = 1.00$ ($SD = 1.59$), Time 2: $M = .61$ ($SD = 1.27$), $F(1,234) = 7.39$, $p < .01$ Same-sex friends Time 1: Mean (M) = 3.12 ($SD = 2.17$), Time 2: $M = 3.91$ ($SD = 2.40$), $F(1,234) = 13.75$, $p < .01$. The number of network members in the 'other' category was minimal; therefore, this category was not included in further analyses.

The percentage of students who had friends within METU at Time 1 was 52 for those living with parents and 59 for those living away from their families. The percentages for friends outside METU were 93 and 91, for those living with and away from families, respectively. At Time 2, 70% of students living with parents and 86% of students living away from parents listed friends within METU; the percentage of students citing outside METU friends was 86 for those living with and 77 for those living away from families. At Time 1, the average duration of within-METU friendships was 75 months ($SD = 56.49$) for students living with and 73 months ($SD = 67.04$) for students living away from families. Thus, it appeared that many students in both residence categories had fairly old friends who were METU students. At Time 1, the average duration of friendships outside METU was 81.08 months ($SD = 44.85$) and 96 months ($SD = 62.38$) for students living with and away from parents, respectively.

Time related changes in network composition

A Gender (female/male) x Residence (Family/Away) x Time (Time1/Time 2) x Network Sector (Family/within METU/outside METU) ANOVA was conducted. The first two factors were between-participants and the last two factors were within-participants variables. The number of network members in each sector (e.g. number of family members, within/outside METU friends) served as the dependent measure. A significant Time x Network Sector interaction emerged, $F(2,460) = 41.83, p < .001, \eta^2 = .15$. Hypothesis 1 was supported because post ANOVA analyses revealed an increase in within-METU friends and decreases in the number of outside-METU friends and family members, Family Time 1: $M = 3.20 (SD = 2.30)$, Time 2: $M = 2.57 (SD = 2.15)$, $F(1,234) = 12.53, p < .01$; within-METU friends: Time 1: $M = 1.27 (SD = 1.84)$, Time 2: $M = 1.85 (SD = 1.84)$, $F(1,234) = 34.14, p < .01$; outside-METU friends : Time 1: $M = 3.47 (SD = 2.61)$, Time 2: $M = 2.27 (SD = 1.84)$, $F(1,234) = 94.35, p < .01$. The Time x Residence x Network Sector interaction predicted by Hypothesis 2 was not significant.

Significant Residence x Network Sector and Gender x Residence x Network Sector effects emerged, $F_s(2,460) 4.12$ and $4.50, p_s < .02, \eta^2_s = .02$. Post ANOVA analyses of the triple interaction revealed that female students living with families had larger number of family members and outside-METU friends in their networks than those living away from families, family members: with parents $M = 3.00 (SD = 1.38)$, without parents $M = 2.83 (SD = 1.66)$, $F(1,78) = 2.83, p < .05$; outside-METU friends: with parents $M = 3.67 (SD = 2.07)$, without parents $M = 2.29 (SD = 1.41)$, $F(1,78) = 12.57, p < .01$. These findings were consistent with Hypothesis 9. Differences between students living with and away from families were not significant for male students.

Added, dropped and retained friends

Hypothesis 3 stated that a) more new within-university friends will be added and b) fewer old friends and outside university friends will be retained in networks of students living away than with families. In order to test this hypothesis, 9 types of friends (3 friend categories (New METU, Old METU, Outside METU) x 3 change categories (added/dropped/retained) were created for each person. Specifically, friends mentioned by each participant at Time 1 and Time 2 were classified with respect to two dimensions: type of friend and change category. First, friends were classified as those who were students in METU but were known before entry to METU (old-METU), those who were students in METU and were met after entry to METU (new METU), and friends who were not students in METU (outside METU). Second, the names of friends were compared for Time 1 and Time 2 and number of friends that were added, dropped and retained were noted for each category. Friends who were mentioned at Time 2 but not at Time 1 were included in the added friends, friends who were mentioned at both times were included under the retained, friends who were mentioned at Time 1 but were dropped at Time 2 were included under the dropped category.

A Gender x Residence x Friend Category (METU old/METU new/outside METU) x Change Category (added/retained/dropped) ANOVA was conducted. Friend Category and Change Category served as within-participant variables and number of friends in each category served as the dependent measure. Time was not an independent variable in this analysis because it was included in the Change Category variable.

Three significant interactions emerged from the above analysis as well as the main effects of Friend Category and Change Category, $F(2,462) = 7.64$ $p < .01$ $\eta^2 = .02$ and $F(2,462) = 98.81$, $p < .001$, $\eta^2 = .18$ (Table 1). Oneway ANOVAs analyzing the significant Residence x Friend Category interaction, $F(4, 462) = 55.87$, $p < .001$, $\eta^2 = .18$, revealed that students residing with parents had more outside METU friends than students living away from parents, With Parents: $M = 1.56$ ($SD = 1.69$), Away $M = 1.19$ ($SD = 1.38$), $F(1, 234) = 5.52$, $p < .05$. In addition, oneway ANOVAs analyzing the Residence x Change Category effect, $F(2,462) = 3.64$, $p < .05$, $\eta^2 = .02$, revealed that fewer friends were retained by students living away than with parents, $M = .79$ ($SD = .73$) vs. $M = 1.02$ ($SD = .66$), $F(1,233) = 6.50$, $p < .01$. Differences between the two residence categories were not significant for numbers of added and dropped friends. The significant Friend Category x Change Category interaction, $F(2, 462) = 4.70$, $p < .02$, $\eta^2 = .02$, was analyzed by conducting oneway ANOVAs comparing type of change for each friend category. The greatest number of additions occurred for friends in the New METU category, while maintenance and dropping were evidenced more for outside-METU than for old or new METU friends (Table 1).

The predicted triple interaction involving Residence, Change Category and Friend Category was not significant. However, planned comparisons revealed that the Residence effect was significant for the number of retained outside-METU friends, $F(1,233) = 7.70, p < .01$. Students living with families retained more outside-METU friends than students living away from families, $M = 2.26 (SD = 1.81)$ vs. $M = 1.67 (SD = 1.50)$ (Table 1). Thus, the results may be construed as providing partial support for Hypothesis 3 (b) because, when compared to those living with families, students living away from families retained fewer outside-METU friends.

Table 1: Number of added, dropped and retained New METU, old METU and outside METU during the first semester

		Friend Category			
		New METU	Old METU	Outside METU	Average
Change category	Added	1.31 _{c2} *(1.83)	.34 _{a1} (.92)	.84 _{b1} (1.38)	.83 (.92)
	Dropped	.18 _{a1} (.61)	.38 _{a12} (.92)	1.37 _{b2} (1.84)	.65 (.77)
	Retained	.18 _{a1} (.61)	.55 _{b2} (1.07)	1.89 _{c3} (1.69)	.88 (.77)
	Average	.56 (.77)	.43 (.61)	1.37 (1.07)	

* SDs in parantheses . Means on the same row not sharing the same letter subscript and means on the same column not sharing the same numerical subscript are significantly different from each other at $p < .05$ by Scheffé

Change in need satisfaction obtained from different network sectors

All students did not have network members within each of the three network categories at the two times of assessment. Conducting analyses only with those who had network members in all three categories at both times would decrease the sample size drastically ($N = 62$). Therefore, three separate analyses were conducted in relation to need satisfaction from each network category; namely; family, within university friends and outside university friends.

Need satisfaction from network members was assessed separately for each network member and different individuals had different network sizes. Thus, it was not possible to conduct a factor analysis with items related to satisfaction of different needs. For this reason scales related to satisfaction of affiliative and instrumental needs were constructed based on the results of two varimax factor analyses were performed for rated importance of various needs at Times 1 and 2.

Two factors loading on the same measures emerged from these analyses based on Time1 and Time 2 measures of need importance.. All items included in these factors had loadings above 0.40. Three items, exchange of goods, practical aid; and self understanding and personal development, loaded on the first factor. This factor, labelled Instrumental Need, explained 26% and 22 % of the variance and had eigenvalues of 1.84 and 1.54 at Times

1 and 2. Four items, emotional support, love, affection; trust; consultation; and having a good time loaded on the second factor. This factor, labelled Affiliative Need, explained 25.4% and 20.4 % of the variance and had eigenvalues of 1.78 and 1.43 for Times 1 and 2.

Reliabilities of measures based on these factors were computed for the first five network members for both assesment periods. The alpha values for Affiliative Need Satisfaction (emotional support, love, affection; trust; consultation; and having a good time) from different network sectors ranged between .75 and .82 ($M = .78$) for Time 1 and between .73 and .78 ($M = .76$) for Time 2. The values for Instrumental Need Satisfaction (exchange of goods, practical aid, self understanding and personal development) ranged between .64 and .76 ($M = .70$) for Time 1 and between .71 and .73 ($M = .72$) for Time 2.

A Gender x Residence x Time x Need ANOVA was performed for need satisfaction from family. The last two variables were within-participants variables; the average need satisfaction obtained from family members was the dependent measure. A significant Time effect $F(1, 184) = 225.45, p < .001, \eta^2 = .552$ emerged from this analysis as well as significant Time x Need, $F(1,183) = 38.43, p < .001, \eta^2 = .174$. and Time x Gender, $F(1,183) = 4.35, p < .05, \eta^2 = .023$, interactions. As predicted by Hypothesis 4(a), family members were important providers of both affiliative and instrumental need satisfaction at Time 1 and their importance declined over time (Table 2). Furthermore, at Time 1 they provided more affiliative than instrumental need satisfaction whereas at Time 2 they provided more instrumental than affiliative need satisfaction. The significant Gender x Time interaction revealed that females reported insignificantly higher need satisfaction from family members at Time 1 than males (Females: $M = 4.97, SD = 1.51$; Males $M = 4.66, SD = 1.51$) whereas males reported higher need satisfaction from family members than females at Time 2 (Males $M = 2.66, SD = 1.81$, Females $M = 2.33, SD = 1.00, F(1,187) = 5.46, p < .05$). These findings were not consistent with Hypothesis 7.

Table 2: Need satisfaction obtained from different network categories at time1 and time 2

		Time			
		Time 1		Time 2	
		Need Satisfaction		Need Satisfaction	
		Affiliative	Instrumental	Affiliative	Instrumental
Relationships	Family	5.04 (1.78)	4.59 (1.64)	2.25 (1.37)	2.73 (.96)
	Outside- METU friends	4.37(1.34)	3.65(1.48)	4.04 (2.68)	4.75 (3.09)
	Within-METU. Friends	4.19 (1.56)	3.66 (1.56)	2.83 (1.35)	3.52 (1.77)

Next, a Gender x Residence x Time x Need ANOVA was performed for need satisfaction from within-university friends. Significant Time $F(1, 108) = 10.99, p < .001, \eta^2 = .096$ and Time x Need, $F(1,104) = 72.46, p < .001, \eta^2 = .411$ effects emerged. Affiliative need satisfaction from within-university friends declined over time $F(1,107) = 48.18, p = .001$, whereas the decline in instrumental need satisfaction was not significant (Table 2). These

results were inconsistent with Hypothesis 4(b), predicting increase in affiliative need satisfaction from within-university friends, and Hypothesis 5, predicting higher increase in need satisfaction from within-university friends for students living away from families.

Last, a Gender x Residence x Time x Need ANOVA was performed for need satisfaction from outside-university friends. A significant Time x Need interaction emerged, $F(1,176) = 96.06, p < .001, \eta^2 = .353$. Affiliative need satisfaction from outside-university friends did not change significantly but instrumental need satisfaction increased $F(1,179) = 17.54, p < .01$ (Table 2). These findings partially supported Hypothesis 6 which predicted that affiliative need satisfaction from outside-university friends would not decrease during the first semester

Discussion

The results of the present investigation were generally consistent with the argument that social networks change with changing social contexts. Network composition changed by inclusion of more friends from the new social context and exclusion of some friends who were outside the new context. New outside-university friends were also added to networks. Ties with outside-university friends may have been established through friends met in the university or through old friends outside the university. This explanation is consistent with Ferrand's (Ferrand, Mounier, & Degenne, 1999) report concerning instrumental function of friendships in providing links to other networks. It may be especially true for students living away from families. Further investigations comparing the two residence categories with respect to network density may prove interesting.

The results also indicated that the number of additions of within-university friends to networks of students living away from families was higher than to the networks of those living with families. Despite the relatively short duration of the study, it might be expected that the former group of students might experience greater overall network change during their stay at the university than the latter. Thus, the likelihood of adoption of university friends as a reference group may be higher for students living away than with families. Thus, university experience may be more influential for those students coming from out of town than for others.

Consistent with earlier reports (Asendorpf & Wilpers, 1998; Oswald & Clark, 2003), the investigation provided evidence for a good deal of network stability during the transition period. Overall, outside-university friends were more likely to be maintained than dropped. It is possible that only close friends were included in networks reported by participants because the instructions asked for initials of people participants felt close to. This explanation is consistent with previous work indicating that close ties are more likely to be

maintained than weaker ties (Wellman, Wong, Tindall, & Nazer, 1996). Ratings of friendship intimacy were not obtained in the present investigation; therefore an intimacy-stability link could not be established. Another possible explanation for stability was the finding that there were no differences between the two residence categories with respect to the number of within university friends or the percentage of students having within university friends. It is possible that friends may be significant others for choosing universities. A further explanation of relative network stability would be the relatively short duration of the investigation.

Results pertaining to need satisfaction were consistent with reports that friends and family are important sources of need satisfaction during adolescence and youth (Hortaçsu, 1997). The results also implied that demands made by social context and life transitions might influence the importance as well as the source of satisfaction of needs. Families and friends of both types provided more affiliative need satisfaction during the beginning of the semester; towards the end of the semester affiliative need satisfaction from all sources declined but instrumental need satisfaction from outside-university friends increased. The priority given to need satisfaction from family members during periods of greater stress is reminiscent of the increase in attachment seeking behavior directed at primary attachment figures during times of stress (Rutter, 1979). It is also consistent with Wellman and Wortley's (1990) arguments related to the different functions of family and friends. The finding that affiliative need satisfaction from family members was highest at a period when adjustment to a new context was an issue and when friends served to fulfill instrumental rather than affiliative needs implies a primary role of family members for satisfaction of needs related to attachment, a system triggered during times of stress. Presumably, when the period of stress was over, individuals turned to friendships, important but secondary attachments. Thus, as demonstrated by earlier research (Hortaçsu, Gençöz, & Oral, 1995) relationships with family and friends may be complementarily related, family relationships assuming primary status at times of stress and friendships assuming importance during periods of exploration. This view is consistent with use of the attachment figure as a secure base for exploration and with more time spent in exploration by secure than insecure babies (Ainsworth, Blekar, Waters, & Wall, 1978).

Consistent with earlier reports (Hortaçsu, 1997), females reported higher overall need satisfaction from parents at the beginning of the school year than males. One explanation for this finding may be that females were not reluctant to seek or receive support from families when under stress. Contrary to Western reports (Reis, Senchak, & Solomon, 1985), networks of females did not include fewer people than those of males; neither did females in general cite a greater number of family members than males. However, females living with parents did cite more family members, pointing to the possibility of

individual level and/or relational differences between females living with and away from families.

An important contribution of the present study was the demonstration of the context sensitivity of the functions of relationships with different network sectors and the complementary nature of the relationship between different categories of relationships. Thus, although need satisfaction from different relationships could not be directly compared due to separate analyses, the present study may be viewed as a contribution to the investigation of relationships between relationships, an important area of investigation (Collins, 1997). Another contribution of the study was the use of different measures related to networks within the same investigation; namely network composition and need satisfaction. It was shown that changes in measures of network composition and affiliative need satisfaction led to different conclusions in the case of outside university friends. Thus, the present investigation showed that simultaneous consideration of different measures might present a different and more comprehensive picture of network change than a view obtained from any single measure. It is also possible that different measures may assume differential importance for different cultures and/or during different life transitions.

The present study excluded variables related to personality differences such as autonomy/dependence and/or attachment quality. Studies indicate that these variables influence network development (Asendorpf & Wilpers, 1998). Specifically, Sorokou and Weissbrod (2005) showed that attachment quality was related to both instrumental and affiliative contacts with parents and Lopez and Gormley (2002) found that adult attachment quality changed during transition to university and that secure to insecure change was associated with greatest deterioration of coping responses. The exploration of the relationship between attachment quality, network development, and need satisfaction from family and friends would be interesting. The inclusion of personality measures may also indicate some individual differences between students who live with or apart from families.

In conclusion, the present study was one of the few linking spatial mobility to longitudinal investigation of networks during a life transition in a non-western culture. It showed that living with and away from parents might influence the transition to attending university in a culture where going away to university is not a normative expectation and where the families are important suppliers of affiliative needs. It is possible that allocentric values prevalent in the Turkish context may be responsible for the relatively high level of network stability revealed by the study. Studies comparing the consequences of transition to college on networks in different cultures may reveal that students' networks may differ at the beginning of the school year due to differential influence exercised by friends in choosing a university.

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