A Longitudinal Study of the Relation between Support Reciprocity and Mental Health: Focusing on the Early Stage of Friendship Development among College Students

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Introduction

Most of the early research on social support has primarily focused on received (or perceived) support from significant others and its relation to mental health (Cohen & Wills, 1985). Afterwards, the transactional nature of social support, that is, the aid and assistance exchanged through social interaction, has gained much attentions (Shumaker & Brownell, 1984). This has led researchers to examine the effect of support reciprocity on mental health (e.g., Buunk, Doosje, Jans, & Hopstaken, 1993; Gleason, Iida, Bolger, & Shrout, 2003). Support reciprocity refers to the perception that the amount of support which individuals receive from their partner is equal to the amount of support which they give to the partner (Buunk & Prins, 1998). Many studies have found that support reciprocity is associated with lower distress (e.g., Buunk et al., 1993; Rook, 1987).

The concepts of long-term individual development and the development of various relationships over time influence the individual’s notion of reciprocity in social relationships (Antonucci & Jackson, 1990). Therefore, the relation between support reciprocity and mental health also changes depending on both individual and relationship developmental stages (Taniguchi & Ura, 2002, 2003). As for individual developmental stages, Taniguchi & Ura (2002, 2003) conducted a one-year longitudinal study, and found that support reciprocity in a friendship was not significantly related to stress responses among elementary school students at either the beginning or end of the school year; meanwhile, it was significantly correlated with lower stress responses among high school students at the end of the school year but not at the beginning. These findings demonstrate that support reciprocity comes to influence mental health both when individual’s developmental stage has become sufficiently high and when their friendship itself has reached its stable stage.

Walster, Walster, & Berscheid (1978) pointed out that individuals in a short-term relationship could easily distinguish whether the relationship is reciprocal or not; individuals in a long-term relationship should be more tolerant of temporary imbalances because they know that the imbalances will be restored in the future. Based on this notion, Taniguchi & Tanaka (2011, 2012a, 2012b) focused on the very early stage of friendship development (within three months after firstly meeting a potential new friend) among elementary, junior high, and high school students; they longitudinally examined the relationship between support reciprocity and mental health at about two weeks, four weeks, and three months after entering each school. In elementary and junior high school students, support reciprocity did not show a significant correlation with stress responses at all the three time points; meanwhile, in high school students, support reciprocity presented a significant association with lower stress responses only at two weeks. These results suggest that high school students put emphasis on support reciprocity at the very early stage of friendship development. According to the idea of early differentiation in relationships (Berg & Clark, 1986), a future course of the relationship with a new acquaintance (either a superficial or close relationship) is determined in quite a short time (at
about two weeks) after they met first. Therefore, the above results seem to indicate that at about two weeks, high school students begin to think that the friendship will develop in the future; subsequently, they come to pay more attention to reciprocal support exchange in the relationship with the potential friend.

This study focused on college freshmen, who were at more advanced developmental stage than elementary, junior high, or high school students, and longitudinally examined the relation between support reciprocity and mental health during the very early stage of their new friendship (at one week, two weeks, four weeks and three months after entering college).

**Methods**

**Participants and Procedures**

A total of 141 college freshmen (70 males and 71 females; \(M_{age} = 18.22 \text{ years}, SD = 9\) participated in this study. They were informed orally about the purpose of this study, their rights to decline or withdraw participation, and their confidentiality. The survey was administered on April 16 (T1; at one week after entering college), April 23 (T2; two weeks), May 7 (T3; four weeks), and July 16 (T4; three months). Participants with missing data were removed from the sample, resulting in a total of 106 participants (51 males and 55 females).

**Measures**

**Support receiving and giving in a friendship.** The nine-item Social Support Scale developed by Fukuoka (1997) was used to assess support receiving and giving in a friendship. The participants were asked to choose a new same-sex friend whom they had first met after entering college and rate how often they had received/given support from/to the friend during the previous week(s) at each of T1 to T4. Answers could range from *never* (1) to *very often* (4). A higher score indicates that they received/gave more support from/to the friend. The alpha reliability was .87 to .95 for support receiving and .86 to .95 for support giving across all the four time points.

**General Distress.** The 28-item Japanese version of the General Health Questionnaire (GHQ-28; Nakagawa & Daibo, 1985) was used to measure distress. The participants were asked to indicate to what degree or how often they had experienced specific symptoms in the previous week(s). Responses were given on a 4-point scale from *not at all/better than usual* (1) to *much more than usual/much worse than usual* (4). A higher score indicates a higher degree of distress. The alpha reliability was .88 to .92 across all the four time points.

**Intimacy of friendship.** The one-item Relationship Intimacy Scale developed by Nakamura (1990) was used to assess intimacy of friendship. The participants were asked to respond to the item based on how close they were to the friend. Answers could range from *an acquaintance* (1) to *a best friend* (4).

**Results**

In order to examine the relation between support reciprocity and general distress, first, we calculated a support reciprocity score by subtracting the support giving score from the support receiving score. A score close to zero represents the equal amount of support receiving and giving; a positive score indicates receiving more support than giving; and a negative score refers to giving more support than receiving. According to the support reciprocity score, the participants were divided into three groups: under-benefited (scoring \(-1\) and below), reciprocally-treated (scoring 0), and over-benefited (scoring 1 and above). Second,

| Table 1: The relation between support reciprocity and general distress |
|---------------------------------------------------------------|
|                  | Whole sample | Superficial relationship group | Close relationship group |
|                  | T1   | T2   | T3   | T4   | T1   | T2   | T3   | T4   | T1   | T2   | T3   | T4   |
| Under-benefited  | 49.4 | 45.5 | 45.3 | 48.2 | 51.1 | 46.6 | 45.0 | 49.5 | 44.2 | 44.3 | 45.9 | 46.5 |
| (SD)             | 12.3 | 11.2 | 8.3  | 10.4 | 13.4 | 11.6 | 8.5  | 10.5 | 6.1  | 10.9 | 8.0  | 10.4 |
| n                | 24   | 34   | 38   | 35   | 18   | 18   | 24   | 20   | 6    | 16   | 14   | 15   |
| Reciprocally-treated | 47.5 | 46.6 | 44.4 | 48.1 | 48.4 | 47.5 | 46.0 | 49.6 | 45.9 | 44.8 | 41.2 | 44.5 |
| (SD)             | 8.6  | 10.4 | 10.6 | 13.3 | 9.5  | 10.5 | 10.3 | 14.3 | 6.8  | 10.3 | 10.8 | 10.0 |
| n                | 42   | 44   | 45   | 50   | 27   | 30   | 30   | 35   | 15   | 14   | 15   | 15   |
| Over-benefited   | 50.7 | 48.4 | 50.0 | 57.3 | 51.0 | 47.7 | 49.2 | 57.1 | 50.4 | 49.7 | 51.0 | 57.5 |
| (SD)             | 10.4 | 10.5 | 10.8 | 8.5  | 10.0 | 10.6 | 8.5  | 6.8  | 11.1 | (10.8)| 13.3 | 10.4 |
| n                | 40   | 28   | 23   | 21   | 21   | 18   | 12   | 11   | 19   | 10   | 11   | 10   |

Note. T1, T2, T3, and T4 represent one week, two weeks, four weeks, and three months after entering college, respectively. Based on friendship intimacy at T4, participants were divided into two groups: superficial relationship group (scoring 1 or 2) and close relationship group (scoring 3 or 4).
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one-way ANOVAs with Bonferroni post hoc comparisons were conducted at each time point, using general distress as a dependent variable and support reciprocity as an independent variable at that time point. The main effect of support reciprocity was marginally significant at T3, $F(2, 103)=2.58, p=.08, \eta_p^2=.05$, and was significant at T4, $F(2, 103)=5.30, p<.01, \eta_p^2=.09$. As shown in the left part of Table 1, general distress in the over-benefited participants was marginally significantly higher than in the reciprocally-treated participants at T3, and was significantly higher than in both the reciprocally-treated and the under-benefited participants at T4. Based on friendship intimacy at T4, we divided participants into two groups: superficial relationship group (scoring 1 or 2) and close relationship group (scoring 3 or 4). For each group, one-way ANOVAs were also carried out. In the superficial relationship group, the main effect of support reciprocity was not significant at any time point. On the other hand, in the close relationship group, the main effect of support reciprocity was marginally significant at T3, $F(2, 37)=2.68, p=.08, \eta_p^2=.13$, and was significant at T4, $F(2, 37)=5.28, p<.01, \eta_p^2=.22$. As with the whole sample, general distress in the over-benefited subjects was higher than in the reciprocally-treated subjects at T3, and was higher than in both the reciprocally-treated and the under-benefited subjects at T4 (see the right part of Table 1).

Discussion

Support reciprocity was associated with general distress at T3 and T4 in both the whole sample and the intimate relationship group; meanwhile, in the superficial relationship group, support reciprocity was not correlated with general distress at each time point. These results indicate that college students gradually attach importance to support reciprocity as they start expecting their new relationship to develop in the future during about two to four weeks.

In Taniguchi and Tanaka’s study (2012b) of high school students, support reciprocity was correlated with stress responses only at about two weeks after they met first. By contrast, in this study, support reciprocity was associated with general distress up to three months after they met. Nakamura (1990) also found that college freshmen’s perception of equity, which is a similar concept to reciprocity, in a new friendship was correlated with their commitment to the relationship at about five months. When compared to high school students, it could take a longer time for college students to establish a stable or intimate relationship with their new acquaintance. In such a stable or intimate relationship, participants are more generous with temporary imbalances of their support exchange; therefore, it is predicted that the relation between support reciprocity and mental health disappears for a while. Future studies should longitudinally examine the relation between support reciprocity and mental health among college freshmen for a much longer period.

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This study longitudinally examined the relation between support reciprocity and mental health among college students, focusing on the early stage of friendship development. A total of 106 first-year college students (51 male and 55 female) completed measures of support exchange in a new friendship, mental health (general distress), and relationship intimacy at one week (T1), two weeks (T2), four weeks (T3), and three months (T4) after entering college. In students whose relationship with their new friend remained superficial at T4, support reciprocity was not significantly correlated with general distress at any time point. In contrast, in students whose relationship grew closer at T4, support reciprocity was significantly related to lower general distress at T3 and T4, in line with the whole sample cases.

Key words: social support, reciprocity, mental health, college students