A Survival Analysis of Adolescent Friendships: The Downside of Dissimilarity

Amy C. Hartl[1], Brett Laursen[1], Antonius H. N. Cillessen[2]
[1]Florida Atlantic University, [2]Radboud University Nijmegen

Introduction

Friendships are important to adolescent adjustment, promoting cognitive, emotional, and social development (Hartup, 1993). Despite their developmental significance, adolescent friendships are fleeting with 50% dissolving within a school year (Bowker, 2004). Two factors are hypothesized to predict friendship dissolution: (1) friend dissimilarity and (2) undesirable individual characteristics. These sources of potential risk are confounded because the largest dissimilarity arises when individuals exhibit extreme levels of a characteristic. Yet despite this confound, no previous study has simultaneously examined these predictors to determine the unique effect of each (Poulin & Chan, 2010).

The present study was designed to examine friendship dissolution across middle school and high school for friendships that originate in the 7th grade. Both friend dissimilarity on school-related behaviors and the individual levels of these characteristics are tested as predictors of adolescent friendship dissolution using discrete-time survival analyses. Discrete-time survival analyses offer advantages over other approaches to examine friendship dissolution because these analyses avoid issues arising from inappropriate pooling in two ways. First, measuring friendship dissolution over multiple time points distinguishes between very brief, short-term, and long-term friendships. Second, because all friendships must begin at the same time point, new friendships are not confounded with existing friendships.

Method

Participants

Participants attended public schools in lower-middle and middle-class neighborhoods in a small Northeastern US city. Students were followed from grade 4 to 12. The final sample included 410 (201 M, 209 F; M = 13.20, SD = 0.46) adolescents who reported a total of 573 reciprocated friendships that originated in the 7th grade.

Measures

In the 7th grade, unlimited peer-nomination procedures were used to measure *Peer Acceptance (*like the most*), Peer Rejection (*like the least*), Leadership (*are leaders*), Physical Aggression (*start fights, pick on, or tease*), Relational Aggression (*ignore others when mad at them*), and Peer Victimization (*get picked on or teased). Nominations were summed and z-standardized within school.

In the 7th grade, teachers reported each participant's *School Competence* on a 4-item scale *(MSCS; Bracken, 1992),* ranging from 1 *(not at all true)* to 7 *(very true).* Item scores were averaged and z-standardized. Internal reliability was good (α = .87).

Figure 1. Hazard curve and survival curve for the dissolution of reciprocated friendships that originated in the 7th grade.
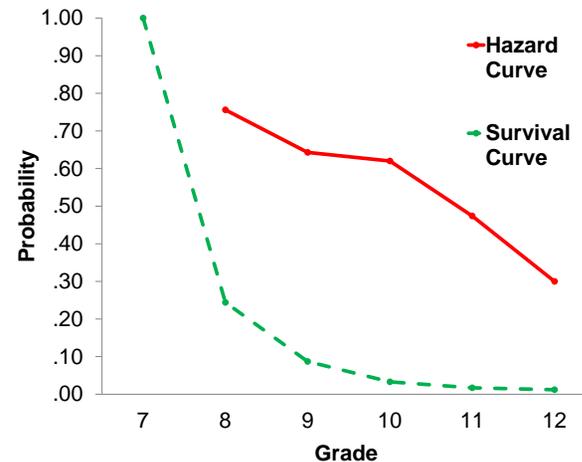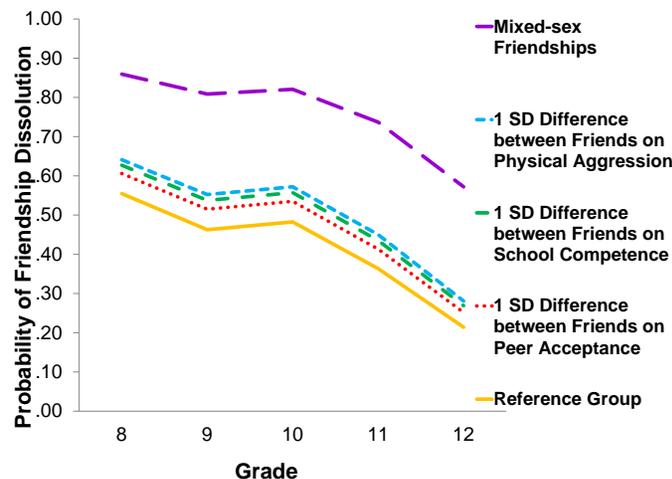

Figure 2. Estimated fitted hazard curves for each significant predictor from the final survival model.

Note. N = 410 adolescents in 573 reciprocated friendship dyads that originated in the 7th grade.

Results

Hazard and Survival Curves

Figure 1 indicates that friendships starting in the 7th grade were at greatest risk for dissolution during the first year (8th grade Hazard Rate: 76%), followed by a somewhat smaller risk during the second and third year (9th-10th grade Hazard Rates: 62% - 64%). There was a decline in the risk for dissolution during the fourth (11th grade Hazard Rate: 47%) and fifth year (12th grade Hazard Rate: 30%) of the relationship. Most friendships that start in the 7th grade are not maintained across the next school year (8th grade Survival Rate: 24%), and only 1% of friendships that started in the 7th grade lasted 5 years (through the end of high school).

Final Survival Model Predicting Adolescent Friendship Dissolution

Figure 2 describes the effects of dissimilarity between friends on the risk of friendship dissolution from grade 8 to 12. The results indicated that dissimilarity predicted friendship dissolution, but undesirable individual characteristics did not significantly predict friendship dissolution. Differences between friends on sex (Hazard OR = 5.05), peer acceptance (Hazard OR = 1.26), physical aggression (Hazard OR = 1.38), and school competence (Hazard OR = 1.36) predicted increased rates of friendship dissolution across adolescence.

Discussion

The present study used discrete-time survival analyses to simultaneously test whether differences between friends or undesirable individual characteristics predicted friendship dissolution across adolescence. Greater dissimilarity between friends, but not individual characteristics, predicted more rapid friendship dissolution.

The findings suggest that compatibility is a function of similarity between friends rather than the presence or absence of a specific individual trait. Differences between friends in sex, social acceptance, overt displays of aggression, and academic performance predicted friendship dissolution across adolescence. Social exchange models of friendships (Thibaut & Kelley, 1959) suggest that dissimilarity on these characteristics may limit or create an imbalance of relationship benefits. Low reciprocity may in turn inspire relationship dissatisfaction and friendship dissolution (Laursen & Hartup, 2002). In contrast, the findings suggest that undesirable individual characteristics are not inherently a risk factor for relationship dissolution. Individual levels of school-related behaviors did not predict friendship dissolution across adolescence.

Friend compatibility and friendship stability are a function of similarity, and not the presence or absence of peer status, physical aggression, or school competence. Our findings suggest that these potentially maladaptive attributes are detrimental to the continuity of a friendship if they are a source of incongruity. Adolescents may desire to affiliate with different others (Thomas & Bowker, 2013), but they are more likely to enjoy successful long-term friendships with similar others.