Indirect Aggression during Early Adolescence: Construct Validity of Peer Estimation Technique

Ming-Chuan Wang and Keng-Ling Lay
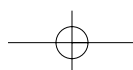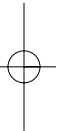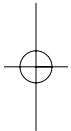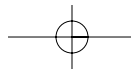
National Taiwan University

This research dealt with three issues related to the construct validity of peer-estimated indirect aggression during early adolescence. The first issue involves whether the construct of indirect aggression is a first-order factor or a second-order factor. The second issue involves the relations between sociometric status and the frequency of indirect aggressive behaviors. The third issue involves whether indirect aggression is more frequently found in girls or boys, or there is no gender difference. Therefore, the specific aims of this study were threefold. The first one was to examine the nature and factor structure of young adolescents' peer-estimated indirect aggression. The second one was to investigate how peer-estimated indirect aggression in young adolescents is related to sociometric status. The third one was to analyze gender differences of indirect aggression in different age groups. A total of 1111 sixth graders ($N = 596$) and eighth graders ($N = 515$) from 18 schools in Taiwan completed a peer nomination procedure for assessing sociometric status and a peer estimation procedure for assessing the frequency of indirect aggression. Two competing models of confirmatory factor analyses including a first order one-factor model and a second order three-factor model were proposed.

Results indicated that the second order three-factor model fits the observed data better than the single factor model. This hierarchical CFA model implies that the higher-order factor, indirect aggression, has a direct causal effect on the lower-order factors, including relationship manipulation, social exclusion, and rumors spreading. Two one-way ANOVAs with sociometric status as the inde-

pendent variable and indirect aggression tendency as the dependent variable yielded sociometric status differences on indirect aggression among both the 6th graders and the 8th graders. Post hoc analyses revealed that the controversial and the rejected subjects in both the 6th grade and the 8th grade are the most frequent users of indirect aggression; they showed higher frequency of indirect aggressive behaviors than those designated as the average, neglected and popular sociometric status. Another gender $\times$ age two-way ANOVA with indirect aggression tendency as the dependent variable indicated a significant main effect of gender, a significant main effect of age, and a significant interaction effect of gender and age. Specifically, the indirect aggression tendency was higher for boys than girls as well as higher for 6th graders than 8th graders. However, those two main effects were qualified by the interaction effect. That is, compared with girls in grade 6, boys in grade 6 were more likely to adopt indirect aggression. By contrast, compared with boys in grade 8, girls in grade 8 were more frequent users of indirect aggression. Additionally, compared with boys in grade 8, boys in grade 6 were more likely to adopt indirect aggression. In contrast, girls in grade 6 were not more frequent users of indirect aggression than girls in grade 8.

In summary, the hierarchical model of indirect aggression proposed by French, Jansen, and Pidada (2002) and Underwood (2003) was initially supported. Using peer estimation technique, the present study not only confirmed findings from Crick and Gropeter's (1995) about the connections between indirect aggression and sociometric status

but also extended the pattern from middle child-hood to preadolescence. Further, the present study offered a possible explanation for why prior studies revealed conflicting gender effect of indirect aggression. Finally, the advantages of using peer estimation technique on measuring indirect aggres-sion were discussed.