
Symposium TP-2
Thursday, July 27, 2006

Of Hamsters and Men: Animal Models of Human Bullying

Newman, M.L., Holden G.W., and Delville, Y.



Studies with animals exposed to repeated social subjugation suggest that the timing of subjugation is an important moderator. In some recent work, we have tested the application of this animal model to human social stress. Approximately 30% of adolescents are victimized by bullies, with consequences ranging from depression to anxiety, and from increased to decreased violence. Based on the animal model, we predicted that bullying in late puberty would be associated with increased anxiety and avoidant responses to confrontation, whereas bullying in early puberty would be associated with better coping strategies and impulsive responses to confrontation. In several online survey studies, college-age participants (N's = 1,187 to 1,483) first completed a measure of their victimization experiences during adolescence. All participants were then invited to complete our questionnaires online. These questionnaires assessed current stress, coping strategies, and emotional responses to a set of scenarios involving frustration. Results were consistent with our predictions and with the animal data. Victimization at either time was associated with higher levels of stress. Victimization in late puberty was associated with lower likelihood of aggressive action, and a tendency to cope using avoidant strategies (e.g., drinking). Victimization in early puberty was only associated with a tendency to cope using problem-focused strategies. Taken together, these data suggest that animal models of social stress are a good starting point for predictions about human behavior. In humans, the consequences of victimization by bullies depend on when it happens relative to puberty. More specifically, after a critical point sometime in mid-puberty, people appear more vulnerable to social stress. We are currently conducting studies to examine the physiological mechanisms behind these differences.