Parent-Offspring Conflict and Cost-Benefit Analysis in Adolescent Suicidal Behavior

Effects of Birth Order and Dissatisfaction with Mother on Attempt Incidence and Severity

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Data on birth order and parent-offspring relations for 1,601 adolescents participating in the National Longitudinal Study of Adolescent Health were used to test hypotheses about the role of adolescent suicidal behavior in parent-offspring conflict. Among adolescents highly dissatisfied with their mothers, the odds that middleborns would make at least one suicide attempt was 23% that of first- and lastborns ($p < .001$), but their odds of receiving medical treatment for their attempts was 8.5 times greater than the odds for first- and lastborns ($p = .032$). The results are tentatively interpreted as supporting the hypothesis that adolescents use suicide attempts to leverage investment from their parents.

KEY WORDS: Add Health; Adolescents; Attempted suicide; Birth order; Blackmail; Cost-benefit analysis; Parent-offspring conflict

Adolescent suicidal behavior is a serious problem. Though it is predominantly non-fatal (there may be up to 1,000 attempts for every fatality; Koplin and Agathen 2004), the death rate is undoubtedly reduced by the interventions of others, the efficacy of modern medicine, and misperceptions about the lethality of methods (e.g., the toxicity of chemical substances; Huott and Storrow 1997). Understanding the causes of suicidal behavior is important for devising effective treatments. It is commonly believed that suicidal behavior is caused by the dysregulation

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of serotonin or other neurotransmitters (Isacsson and Rich 1997) or the desire to escape depression and other unpleasant feelings (Baumeister 1990; Schneidman 1993). These hypotheses have been somewhat undermined by recent evidence that antidepressants promote suicidal behavior in adolescents and adults (Ferguson et al. 2005; Whittington et al. 2004). There is therefore a great need to consider and rigorously test a broader range of hypotheses.

Adolescent suicidal behavior is highly associated with conflict and other disturbances in the family environment (Wagner 1997). Several evolutionary and economic hypotheses suggest that adolescent suicidal behavior might be used to negotiate conflicts between parents and offspring over the allocation of parental investment (PI). The honest signaling hypothesis proposes that offspring may take risks that jeopardize their lives to convey to parents that their need for help is real (Cutler et al. 2001; Godfray 1991; Kilner and Johnstone 1997). The cry-for-help hypothesis (Stengel and Cook 1958) is similar to honest signaling except it does not require the risk incurred to accurately reflect the need for help. The leveraging hypothesis proposes that desperate offspring may take risks that endanger their lives to leverage extra investment from their parents, whose interest in the continued existence of their offspring is put in jeopardy (Johnstone 1996; Parker and Macnair 1979; Zahavi 1975). These hypotheses are similar because offspring must avoid taking risks that are certain to result in death; the goal is not to kill themselves, but to use the suicide attempt as a vehicle for acquiring extra PI. They are also similar in that parents must become aware of the attempt before they can respond to it.

There is some indication that suicide attempts may indeed have useful social effects. Anecdotes in large- and small-scale societies describe adolescents using suicide attempts to compel parents and significant social partners to provide help or make concessions (Baechler 1979; Giddens 1964). Little formal research has been conducted on this issue, but one study shows that parents treat their adolescent offspring with greater sympathy after they have made attempts (Wagner et al. 2000), and another suggests that suicide attempts may have a positive impact on income (Marcotte 2003). Moreover, adolescents are more likely to make repeat attempts when family relations remain conflicted (Brinkman-Sull et al. 2000; King et al. 1995; Spirito et al. 2003), which suggests that they may be a strategic response to conflict.

The three hypotheses suggest that cost-benefit analyses underlie the decision to make suicide attempts, but they differ on the cost-benefit factors that are weighed and analyzed. Honest signaling requires differences in risk-taking to reflect differences in condition (the need for PI); else, risk-taking is not an honest signal. Put in cost-benefit terms, the marginal benefits of risk-taking must be greater for those in worse condition (greater need) (Godfray 1993). Thus, honest signaling predicts that offspring modulate their risk so that it reflects their condition.

Leveraging proposes that the risks that offspring impose on their parents play a functional role in forcing the parent to give up the resource. (In honest signaling and cry-for-help, the imposition of risks on parents is incidental.) For instance,