

Impact of Adolescents' Perceived Self-Regulatory Efficacy on Familial Communication and Antisocial Conduct

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The present study tested the hypothesis that perceived self-efficacy to resist peer pressure for high-risk activities is related to transgressive conduct, both directly and through the mediation of open familial communication. Adolescents rated their self-regulatory efficacy, openness of communication with parents, and their involvement in delinquent conduct and substance abuse. Results of structural equation modeling confirmed that a high sense of efficacy to ward off negative peer influences was accompanied by open communication with parents about activities outside the home and by low engagement in delinquent conduct and sub-

stance abuse. Both the posited direct and mediated paths of influences were replicated for males and females, although girls exhibited a slightly weaker direct relationship between self-regulatory efficacy and transgressive conduct. The combined influence of self-regulatory efficacy and supportive parental communication and monitoring accounted for a substantial share of the variance in delinquent conduct and substance abuse. A test of an alternative causal model, that engagement in transgressive activities undermines self-regulatory efficacy and familial communication and monitoring practices, provided a poor fit to the data.

Keywords: Self-efficacy, familial communication, antisocial conduct.

The beliefs that people hold about their efficacy to exercise influence over events that affect their lives play a major role in shaping the course of personal development. In this agentic sociocognitive view (Bandura, 1986, 1997a), people are self-organizing, proactive, and self-regulating agents in their own development rather than just recipients of socialization influences. This self-directive capacity operates through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than people's beliefs in their own efficacy. Unless they believe they can produce desired results through their actions they have little incentive to act or to persevere in the face of difficulties.

The findings of diverse lines of research support the role of perceived self-efficacy in intellectual development (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996a; Pajares, in press; Schunk, 1989; Zimmerman, Ban-

dura, & Martinez-Pons, 1992); creativity (Zimmerman & Bandura, 1994); social development and well-being (Bandura, Pastorelli, Barbaranelli, & Caprara, 1998a); choice and development of career paths (Bandura, Barbaranelli, Caprara, & Pastorelli, 1998b; Hackett, 1995; Lent, Brown, & Hackett, 1994); group performance (Bandura, 1991); and health functioning (Bandura, 1997b).

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The present research is designed to clarify the paths of influence through which adolescents' beliefs in their self-regulatory efficacy affect their level of involvement in antisocial activities and substance abuse.

Although the belief of personal efficacy serves a regulatory function in all major transitions of life, it is especially important during adolescence. The passage through adolescence to adulthood has become more stressful and riskier than in the past (Hamburg, 1992; Leffert & Petersen, 1995). Physical maturation occurs earlier, though adolescence is socially prolonged because of the extended educational obligations and delayed entry into occupational roles. Moreover, it is a time of exploratory engagement in high-risk activities, substance abuse, unprotected sexuality, and transgressive conduct. Heavy involvement in these types of activities can seriously jeopardize personal development. Negative peer modeling and pressures increase developmental risks by promoting activities that can foreclose pathways conducive to prosocial development or provide pathways conducive to antisocial conduct.

Most adolescents negotiate the important transitions of this period without undue disturbance or discord (Bandura, 1997a; Elliott, 1993; Loeber, 1990; Moffit, 1993). But some get deeply involved in high-risk activities that give rise to detrimental lifestyles. A comprehensive theory of personality development must explain why some people persist in detrimental conduct, whereas most disengage from risky experimentations. This requires specification of the sociocognitive mechanisms through which control over peer pressures for transgressive conduct is exercised.

Social cognitive theory specifies classes of determinants and mechanisms that operate in concert to produce coherent and stable patterns of conducts (Bandura, 1997a, in press). Given that perceived self-regulatory efficacy has proved to be an important contributor to success in a variety of domains, it is likely to be critical in mastering successfully the various task demands, risks, and challenges in the passage through adolescence to adulthood. Youngsters who enter adolescence beset by a disabling sense of inefficacy transport their vulnerability to stress and dysfunction to new environmental demands, they are less able to enlist familial guidance and support, and they are more likely to be exposed to peer pressures conducive to various hazardous and transgressive activities (Bandura, 1997a). In contrast, youngsters who have a high sense of self-regulatory efficacy are better equipped to cope with the transitional stressors of adolescence, to pursue activities that build competencies, to voice effectively their opinions and aspira-

tions with parents and adults, and to resist peer pressures to engage in risky or antisocial conducts (Bandura, 1997a).

The present research is part of an extended longitudinal project aimed at identifying the developmental determinants and mechanisms of social adaptation during the transitions from childhood to adolescence to adulthood (Bandura et al., 1996a,b; Caprara, 1996). Previous studies have focused mainly on academic achievement, problem behavior, and emotional well-being in late childhood and early adolescence. This research analyzes how self-regulatory efficacy affects communication with parents and engagement in antisocial behavior during middle adolescence. In the conceptual model guiding this research, perceived self-regulatory efficacy influences engagement in antisocial conduct both directly and indirectly by its effects on parental communication and monitoring patterns.

A vast literature underscores the importance of familial relationships and open communication about matters of concern in successful adolescent adjustment (Bandura & Walters, 1957; Grotevant, 1983; Noller, 1994; Steinberg, 1989; Youniss & Smollar, 1985). The greater the mutuality is in familial relationships, the more the parents promote achievement of the developmental tasks that adolescents face. The more open the communication among parents and children, the greater the consensus on reciprocal obligations and expectations. The more parents encourage the expression of personal needs and aspirations, the more children turn to them for guidance and support. Open communication fosters parental trust in their children's freedom and autonomy, reduces their vigilance as their children become more self-directive, and enhances their confidence and affective support.

Familial relationships grounded in mutual acceptance and open communication enable adolescents to weather transitional stressors in a variety of ways (Marta, in press; Scabini, 1995). Mutuality fosters children's need for differentiation and individuation. As a consequence they are less inclined to seek to prove their identity by challenging parental guidance through involvement in high-risk transgressive activities. Mutually supportive relationships not only buffer the adverse effect of transitional stressors, but serve an enabling function (Bandura, 1997b).

The role of parental involvement and monitoring as protective means against the development of problem behaviors has been documented in diverse programs of research (Patterson, Reid, & Dishion, 1992; Robins & Rutter, 1990; Rolf, Masten, Cicchetti, Neuchterlein, &

Weintraub, 1990). The influence that parental control beliefs exert on children's socialization has been emphasized as well (Schneewind, 1995). But little attention has been paid to the role that children's efficacy beliefs exert on communication with parents and on antisocial conduct.

As children increase in maturity and development, family management practices change in form and locus of influence. In childhood, the interactions are centered heavily in the family. This enables parents to influence directly the course of their children's development. As children move increasingly into the larger social world outside the home, parents cannot be present to guide their behavior. They rely on their children's behavioral standards and self-regulatory sanctions to serve as guides and deterrents in nonfamilial contexts. To provide further guidance and support to adolescents as they try to manage major biological, educational, and social role transitions, parents need knowledge of their activities and choice of associates outside the home. Parents have to depend largely on the adolescents themselves to tell them what they are doing when they are on their own away from home. Adolescents, therefore, play a major agentic role in this distal guidance process.

For the reasons already given, it was hypothesized that perceived efficacy to resist peer pressures for risky activities would facilitate open communication with parents and reduce proclivity to antisocial conduct. By acting on beliefs that they can manage peer pressures, adolescents reduce the likelihood of engaging in substance abuse and antisocial activities. To the extent that they believe they can manage such pressures they feel free to discuss with their parents the predicaments they face. Open familial communication enables parents to provide guidance and social support, and identifies potential problem situations that may warrant some monitoring. Supportive parental communication and monitoring, in turn, operate as social safeguards against detrimental involvement in risky activities. By contrast, adolescents who have a weak sense of self-regulatory efficacy are not only less successful in resisting detrimental peer pressures, but are reluctant to discuss their transgressive activities with their parents.

Given the differential opportunities and consequences of engaging in antisocial conduct for females, the role of gender in the postulated conceptual scheme is examined separately. Although males are typically more heavily involved in antisocial behavior than are females, the posited paths of influence were expected to be similar across gender.

Method

Participants

The participants in this study were 162 males and 162 females ranging age from 14 to 18 years with a mean age of 15.7 for males and 15.6 for females. They were enrolled in various grades of high schools in a residential community located near Rome. The community represents a socioeconomic microcosm of the larger society, containing the families of skilled workers, farmers, professionals, local merchants and their services staff. The adolescents were contacted by telephone and invited to participate in the study, for which they received a small payment. Ninety percent of the adolescents agreed to participate in the study.

Measures

Participants completed a set of scales measuring the variables of theoretical interest. The scales were administered by three female researchers during specially scheduled sessions in the school to groups of about 50 participants at a time.

Self-Regulatory Efficacy

Adolescents' perceived capability to resist peer pressure to engage in high-risk activities that can get them into trouble was measured by five items. "How well can you resist peer pressure to drink beer, wine, or liquor?" provides one example. For each item, participants rated on a 5-point scale their beliefs in their level of efficacy withstand pressure to engage in the designed activity. The Cronbach reliability coefficient was .75. This subset of items was shown in factor analysis to be a separate factor in a larger set of multifaceted self-efficacy scales (Bandura et al., 1996a).

Open Communications with Parents

Communication with parents was measured by a 10-item subscale from the 20-item Parent-Adolescent Communication Scale (PACS) developed by Barnes and Olson (1982) to assess adolescents' open and problematic communication with both parents. The adolescents rated, on a 5-point scale, the extent to which they felt free to discuss problems with their parents and that they would respond in an understanding, supportive way. Factor analysis of the full scale confirmed the two-factor structure: one factor representing open communication

and the other problematic communication. For purposes of the present study, only the open communication subscale was used. The α coefficient was .83 for communication with both the mother and the father.

Monitoring

The extent to which adolescents kept their parents informed about their activities and associates outside the home was assessed with seven items, each rated using a 5-point scale. They rated how often parents asked them about their activities when they were off on their own. This scale was developed by Capaldi and Patterson (1989). Factor analysis confirmed the presence of a single factor explaining about the 52% of the variance. The α coefficient for the scale was .84.

Delinquent Behavior

Delinquent behavior was measured by the relevant items from the Child Behavior Checklist developed by Achenbach and Edelbrock (1978). The Delinquency subscale, comprising 22 items for males and 19 items for females, assesses a wide range of transgressive behaviors, including theft, cheating, lying, destructiveness, truancy, and use of alcohol and drugs. Each item was rated on a 3-point scale. The α coefficient for the scale was .87 for males and .86 for females.

Substance Abuse

The extent to which the adolescents used alcohol, cigarettes, marijuana or other drugs in the last year was assessed by six items rated using a 2-point scale. The α coefficient for the scale was .70.

Results

Table 1 presents the means and standard deviations, respectively, for boys and girls for the different variables in the conceptual model. Boys were equally open with both their parents about their outside activities, whereas girls were more disclosing to their mothers than to their fathers, $t(146) = 8.07, p < .001$. Compared to boys, girls had a stronger sense of self-regulatory efficacy, but experienced a higher level of parental monitoring of their activities and associates outside the home. Boys engaged in more substance abuse and delinquent conduct than did the girls.

Table 2 shows the correlation matrix for the different variables. Perceived self-regulatory efficacy is accompanied by open communication with both parents, high parental monitoring, and a low level of delinquent

Table 1

Means, standard deviation and *F* test for gender differences for the variables of the conceptual model.

Variable	Boys (n = 151)		Girls (n = 147)		F	p
	M	SD	M	SD		
1. Self Efficacy	3.59	.97	3.80	.98	3.49	.06
2. Openness (M.)	3.72	.67	3.99	.72	12.05	.001
3. Openness (F.)	3.66	.67	3.60	.80	.46	.50
4. Monitoring	3.69	.71	4.13	.75	27.46	.0001
5. Delinquency	.46	.31	.26	.25	37.21	.0001
6. Substance Abuse	.42	.26	.24	.24	38.49	.00001

Note. Degrees of freedom for the *F* test were (1, 296). The number of subjects differs slightly from that reported in the method section because only subjects with no missing values on any of the scales were included.

Table 2

Correlation matrix for self-regulatory efficacy, familial communication, and transgressive conduct.

	1	2	3	4	5	6
1. Self-Efficacy		.19*	.27***	.27***	-.47***	-.27***
2. Openness (M.)	.38***		.71***	.53***	-.39***	-.22**
3. Openness (F.)	.30***	.81***		.50***	-.33***	-.24**
4. Monitoring	.30***	.53***	.46***		-.42***	-.31***
5. Delinquency	-.54***	-.41***	-.39***	-.43***		.45***
6. Substance Abuse	-.46***	-.19*	-.19*	-.19*	.43***	

Note. Correlation coefficients for boys ($n = 151$) are below the principal diagonal, those for girls ($n = 147$) are above the principal diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$.

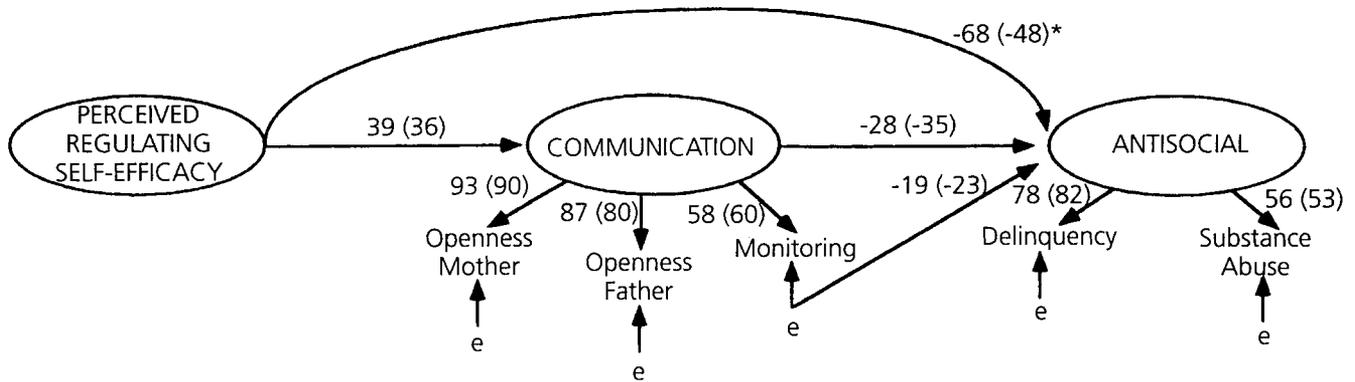


Figure 1

Structural Equation Model of the patterns of influence through which perceived self-regulatory efficacy affects delinquent conduct and substance abuse. The coefficients in parentheses are for girls, the coefficients not in parentheses are for boys. All the path coefficients are significant beyond the $p < .05$ level. All the path coefficients are not significantly different across gender, except the one with the asterisk (*). The letter "e" indicates the error term for the observed variables.

cy and substance abuse in both boys and girls. Open communication with both parents is highly and positively related to parental monitoring and negatively related to delinquent conduct and substance abuse.

The pattern of relationships among the variables was examined by means of structural equation modeling (Bollen, 1989) using the EQS program (Bentler, 1995). Following Bollen (1989), self-regulatory efficacy was posited as a "single-indicator" latent variable to take into account measurement error and thus obtain more precise estimates of structural parameters. Following the recommendation of Bollen (1989), error variance for this variable was estimated by fixing it at 1 minus the reliability estimate of self-regulatory efficacy obtained in our sample.

Open communication was represented by a latent variable combining open communication with both parents and their level of monitoring of outside activities. Antisocial behavior was also represented by a latent variable combining delinquent conduct and substance abuse. Analyses of the paths of influence were conducted within a *multiple groups* model approach, which estimated simultaneously the same pattern of relationships among variables in the two samples of boys and girls. In this approach, equivalence among different samples is evaluated by constraints that impose identical estimates for the model's parameters (Byrne, 1994; Scott-Lennox, & Scott-Lennox, 1995). In EQS the plausibility of these equality constraints is examined by the Lagrange Multipliers (LM) test (Bentler, 1995). For each of the constraints specified, the LM test provides evidence that the

constraint is true for the populations involved. In the present study, the equality constraints were imposed on path coefficients across boys' and girls' groups.

The results of the structural equation modeling are shown in Figure 1. One modification in the model was introduced to improve the model's fit. It included a direct path from the error term of monitoring to antisocial conduct. This supplementary path reflects the fact that parental monitoring affects antisocial behavior independently of open communication.

All path coefficients depicted in Figure 1 were equivalent across gender. However, the direct link from self-regulatory efficacy to antisocial behavior was slightly weaker for girls than for boys. The constraint related to this path was relaxed and the model reestimated. The goodness of fit of the model to the data was corroborated by all the fit indices considered. These tests yielded a nonsignificant $\chi^2(18,298) = 23.35$, a normed fit index (NFI) of .96, a nonnormed fit index (NNFI) of .97, a comparative fit index (CFI) of .99, and a root mean square error of approximation (RMSEA) of .03.

All the posited paths of influence were significant for both boys and girls. In accordance with the conceptual model, perceived self-regulatory efficacy was directly related to engagement in antisocial behavior and substance abuse. The higher the self-regulatory efficacy, the lower the antisocial conduct. Perceived self-regulatory efficacy also had an impact on communication with parents, which in turn was related to antisocial behavior. The higher the children beliefs in their self-regulatory efficacy, the more openly they talked to their parents

about their activities when they are away from home and the less they engaged in antisocial conduct.

The model accounted for a substantial amount of variance in antisocial behavior, although it was somewhat higher for boys ($R^2 = .73$) than for girls ($R^2 = .53$).

An alternative conceptual model was tested in which the direction of causation was reversed. For this causal scheme, involvement in antisocial activities and substance abuse undermines adolescents' perceived efficacy to withstand peer pressures to engage in transgressive activities, curtails disclosure to their parents what they are doing when they are out of their own and impairs parents' ability to monitor their adolescents' activities and associates outside the home. The test of this causal model revealed that it does not fit the empirical data.

Discussion

The results of the present study attest to the influential role of perceived efficacy to manage peer relationships and familial communication in counteracting involvement in delinquent conduct and substance abuse. Adolescents who had a strong sense of efficacy to exercise control over adverse peer pressures refrained from antisocial conduct and substance abuse. These findings lend further support to the contribution of perceived personal efficacy to self-management of transgressive conduct found with younger children (Bandura et al., 1996a). The conceptual model positing that adolescent self-regulatory efficacy and parental communication affect transgressive conduct fits the empirical data well, whereas the alternative model that transgressive conduct drives perceived efficacy and familial communication practices does not provide an acceptable fit to the data.

Perceived self-regulatory efficacy operates not only directly on transgressive conduct, but in concert with supportive parental communication. The findings of this study show that peer relationships do not disembody adolescents from their families. Moreover, adolescents function agentially rather than just reactively in their transactions with peers. To the extent that adolescents are assured in their capability to withstand peer pressure to pursue troublesome activities, they feel free to discuss sensitive and problematic matters with their parents. Open communication with parents provides a source of support and guidance for managing conflictful situations in peer relationships (Bandura & Walters, 1959; Scabini, 1995). Adolescent who have a low sense of

efficacy to resist peer pressure for transgressive activities are unlikely to talk freely with their parents about what they are up to outside the home. Communicative avoidance shuts out a source of assistance on how to manage an expanding social world centered heavily around peers, many of whom get themselves into highly risky situations.

Experimentation with risky activities is common in the passage out of childhood status (Elliot, 1993; Jessor, 1986). Most adolescents who experiment with problem behaviors quit them after a while, but some become deeply and chronically involved in them. Social cognitive theory specifies a number of factors that determine the depth of involvement in high-risk activities and the ease of disengagement from them (Bandura, 1997a). Among these factors is the amount of social guidance and development of self-regulatory capabilities to manage potentially risky situations and to extricate oneself from detrimental ones. The findings of this study show that, indeed, a secure sense of self-regulatory efficacy and supportive familial communication enable adolescents to elude hazardous and antisocial pathways.

In earlier phases of child development, parents contribute to acquisition of self-regulatory efficacy (Bandura et al., 1996a). With growing independence, adolescents go off on their own much of the time and have to rely on their self-regulatory capabilities in dealing with the social world outside the home. With this change in the balance of influence, further parental guidance becomes conditional on adolescents informing them about their outside activities and associates. Unless parents are kept well informed, they cannot provide much guidance on how to manage troublesome situations away from home. For this reason, adolescents' perceived self-regulatory efficacy assumed priority in the conceptual model and analysis of self-management of transgressive activities.

A strong sense of self-regulatory efficacy was accompanied by parental monitoring of the activities their adolescents are engaging in outside the home. Parental monitoring was, in turn, associated with low involvement in antisocial activities. Failure to keep track of where their adolescents were going, what they would be doing, and with whom they would be associating can give license to engagement in transgressive conduct. The findings are in accord with those of Patterson, Dishion, and Bank (1985), underscoring the growing importance of parental monitoring as a vehicle of guidance as children's social life extends increasingly into the larger community.

This study extends the research on parental monitoring by highlighting the agentic aspects of this distal

guidance process. It is the adolescents who feel most secure in their self-regulatory efficacy who are highly disclosing of their predicaments and outside activities to their parents. Confiding behavior creates the understanding for constructive guidance. In contrast, adolescents who have a low sense of self-regulatory efficacy reveal little to their parents about what they are doing away from home. As a consequence, parents provide little supervision. Monitoring efforts in the absence of mutual understanding are apt to be viewed as intrusive surveillance to be circumvented.

Both the direct and familiarly mediated paths of influence from perceived self-regulatory efficacy to antisocial conduct were replicated across gender status. But the efficacy direct path was somewhat weaker for girls. Boys were more extensively involved than girls in antisocial activities and substance abuse. This most likely accounts for the difference. Restricted ranges lower the magnitude of relationships.

Although girls were less transgressive, they were more heavily monitored. The risk of pregnancy with its long-term consequences is of central concern to parents of adolescent girls. This may explain the apparent paradox. An appropriate next stage for research is microanalyses of gender differences in types of peer pressures exerted, the classes of activities that parents monitor most closely, and the ways in which perceived self-regulatory efficacy operates in these transactions. Microanalytic studies can further our understanding of causal structures (Bandura, 1997a).

Although the test of alternative conceptual models shed some light on possible directions of the paths of influence, the findings must be interpreted with caution because the processes were examined cross-sectionally with the adolescents providing the data for the factors of interest. However, there is evidence that children's perceived self-regulatory efficacy predicts transgressive conduct over time (Bandura, 1997a). With regard to the familial environment, how children perceive their parents' expectations and socialization practices are usually most predictive of the effects they exert because it is the construed environment that constitutes their social reality (Phillips and Zimmerman, 1990). Parents and teachers are rarely present in the setting in which the adolescents engage in transgressive activities with their peers. The adolescents are the ones who are in the best position to report the extent to which they are using alcohol and other drugs and are involved in various types of antisocial activities. Nevertheless, the pattern of relationships obtained cross-sectionally needs to be tested longitudinally. As adolescents become more independent, partic-

ular behavior patterns become lifestyle orientations with distinctive social affiliation that are more publicly observable and measurable.

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