

It's not what you say, it's how many different ways you can say it: Links between divergent peer resistance skills and delinquency a year later

By: A. Jordan Wright, [Tracy R. Nichols](#), Julia A. Graber, Jeanne Brooks-Gunn, Gilbert J. Botvin

Wright, A.J., Nichols, T.R., Graber, J.A., Brooks-Gunn, J. & Botvin, G.J. (2004). It's not what you say, it's how many different ways you can say it: Links between divergent peer resistance skills and delinquency a year later. *Journal of Adolescent Health*, 35(5), 380-390.

Made available courtesy of Elsevier: <http://dx.doi.org/10.1016/j.jadohealth.2003.12.008>

*****© Society for Adolescent Medicine. Reprinted with permission. No further reproduction is authorized without written permission from Society for Adolescent Medicine & Elsevier. This version of the document is not the version of record. Figures and/or pictures may be missing from this format of the document. *****

This is the author's version of a work that was accepted for publication in *Journal of Adolescent Health*. Changes resulting from the publishing process, such as peer review, editing, corrections, structural formatting, and other quality control mechanisms may not be reflected in this document. Changes may have been made to this work since it was submitted for publication. A definitive version was subsequently published in *Journal of Adolescent Health*, Volume 35, Issue 5, (2004) DOI: 10.1016/j.jadohealth.2003.12.008

Abstract:

Purpose

To examine whether generation of 'socially appropriate' responses or divergent responses to continued peer pressure is a more effective deterrent of actual delinquency.

Methods

The sample of 129 urban adolescents included both boys and girls (51.9% male) and was predominantly black (48.%) and Hispanic (28.7%). They were studied longitudinally from seventh to eighth grade in New York City from 2000-2001. Resistance strategies to offers to smoke and to shoplift were assessed in two separate videotaped role-plays. Socially appropriate responses were defined as assertive and nonaggressive, including the use of a simple no; direct, declarative statements; and offering prosocial alternatives. Divergent responses were defined as multiple unique response types within the same situation regardless of appropriateness. Data were analyzed using hierarchical logistic regressions.

Results

High use of divergent responses was consistently associated favorably with changes in delinquency from seventh to eighth grade. High use of divergent responses was associated with

lowered likelihood to vandalize, steal or shoplift, and commit multiple acts of any type of delinquency, even after controlling for seventh grade delinquency. Socially appropriate responses showed little association to any delinquent behavior.

Conclusions

Different social pressure situations and contexts may require different responses. As trying to teach effective responses for every single potential peer pressure situation would be impossible, promoting divergent thinking may be an attractive alternative.

Keywords: Adolescent | Social interaction | Divergent thinking | Delinquency | Peer group

Article:

The present study proposes a new component of peer pressure refusal skill, the ability to produce divergent responses to continued peer pressure, and tests it in comparison to what the literature and prevention programs tout as optimal responses to peer pressure, socially appropriate responses, in predicting actual, self-reported delinquency. Specifically, observed measures of peer pressure refusal strategies in an urban seventh grade sample, hypothetical peer pressure role-play vignettes, are used to predict changes in delinquency over the subsequent year.

Dodge et al 1 and 2 have developed a social-information processing model to explain how adolescents (or children) respond to social challenges or solve social problems. In this model, individuals analyze the situation (perceive and interpret cues), generate possible responses and evaluate the consequences of different responses, and ultimately enact the chosen response within the situation. Much research has been aimed at defining those features of the enactment of responses in social situations that predict competent social performance ^[3]; these features have been considered social skills. In fact, so much attention has been paid to skilled social interactions that most effective adolescent prevention programs have emphasized teaching a range of social skills 4, 5 and 6. Less research has been undertaken focusing on the second stage of the model, the decision-making component of social skills.

Most often, skills have been evaluated in terms of aggressiveness or assertiveness, such that effective responses to social problems or challenges are assertive and nonaggressive 7, 8, 9 and 10. Assertiveness is defined as the act of standing up for one's rights when a person feels they are being infringed upon, but without violating the rights of others ^[11]. Making assertive responses in social situations has been linked to lowered adolescent risk-taking behavior and the ability to resist peer pressure to use drugs in hypothetical situations 7 and 10. However, some studies have found certain components of assertiveness, such as social and dating assertiveness, to be associated with higher levels of substance use. In contrast, youth who score high on substance-specific refusal assertion have been found to be less likely to use drugs 10 and 12.

Aggression represents the other end of the spectrum and is defined as infringing upon or violating another's rights to get one's own needs met. It often involves the use of inappropriate means of expression^[11]. Aggressive responses in social situations have generally been linked to damaging relationships with friends, social rejection by peers, and low academic achievement 8 and 9.

Both assertiveness and the expression of anger appear to be highly contingent upon the context of the situation. Features within peer relationships may be differentially relevant for certain outcomes by gender or cultural group^[13]. For example, certain responses may be regarded as appropriate in one setting (such as urban schools) and less appropriate in another (suburban schools)^[14].

As noted, it has generally been suggested that a response to peer pressure that is assertive and nonaggressive, reflecting the ability for an adolescent to stand up for his or her rights without infringing upon the rights of others, should be the most effective response to peer pressure 7, 8, 9 and 10. In fact, because this type of response repudiates the peer pressure directly without diminishing the social relationship^[15], it can be considered a 'socially appropriate' response. These responses by adolescents have been associated with increased sexual health, lowered substance use, better impulse control, and effective resolution of peer conflicts when measured by self, teacher, and camp counselor reports 7,9 and 10. Many studies have disagreed about what constitutes a specific effective response, however. Using a direct and simple "no" and giving an excuse, for example, have been considered effective in some studies 16 and 17 and less effective in others because they have been found to invite further pressure and negotiation 18 and 19. For the purposes of this study, socially appropriate responses include a simple and direct "no," direct simple statements of the adolescent's position, and offers of prosocial alternatives. Specifically, consistently providing socially appropriate responses to continued pressure is examined as a predictor of subsequent delinquent behavior. Thus, rather than considering how these responses influence the course of hypothetical situations, the focus is on how types of responses generated predict the actual behaviors adolescents report engaging in.

As is highlighted by disagreement over what constitutes a specific effective response, assertive, nonaggressive responses may not always be the most effective strategies when facing social challenges, or, specifically, peer pressure. Divergent thinking (also referred to as 'divergent production' in the literature) is the ability to consider multiple strategies when solving a problem. In particular, when a single strategy fails, individuals who use more divergent thinking are able to abandon the poor strategy and replace it with another possibly, though not necessarily, superior strategy. Regardless of the effectiveness of the strategy that replaces the first poor one, divergent thinking simply offers an individual options from which to choose. An optimally divergent thinker will continue switching strategies until he or she encounters an effective one. These responses could conceivably be contradictory, though generally they would all have the same end, to refuse the pressure. Divergent thinking in response production has been linked to better problem-solving abilities, more generally 20, 21, 22 and 23, although application of this

perspective to social problems and peer pressure has not been made. Divergent thinking is generally assessed using verbal or written standardized measures that call for proliferation of options. None of the studies to date has assessed divergent thinking in a social context. Several studies, however, have associated divergent thinking as assessed by standardized measures with several indicators of social competency. Kagan^[22] looked at divergent thinking as related to teacher-reported social competency in a sample of fifth and sixth graders. Although demographic information was not reported, it is likely that the sample was predominantly nonminority and suburban. Using tests of both verbal and nonverbal (figural) divergent production, as well as self-reported attitudes toward divergent production and teacher reported ratings of creativity, Kagan found that divergent thinking was positively related to socially appropriate classroom and interpersonal behaviors as rated by teachers, even when controlling for verbal ability.

“Cognitive complexity” is another term that has been used to represent divergent thinking. Within this context of cognitive skill, this construct has been measured predominantly by a task (the Role Category task) that assesses how well one proliferates options when making decisions. Several investigators have found that greater cognitive complexity is related to skill in verbal communication, specifically the ability to adapt and modify what one says to meet the needs of the listeners^[24]. Divergent thinking (i.e., cognitive complexity) in a peer pressure situation would manifest itself in how many different types of refusal strategy an adolescent employs when confronted by continued peer pressure.

One major issue in the study of peer resistance strategies that must be addressed is measurement. With growing evidence of the complexity of social interaction, the importance of evaluating the effectiveness of responses, or behavior, within specific social contexts is consistently gaining more attention^{1, 25 and 26}. Being able to generate an effective response in one situation does not guarantee being able to do so in another situation. Therefore, to understand how adolescents deal with peer pressure situations, responses in these situations must be assessed. In addition, the majority of studies on expected responses to social interactions or problems rely on self-report data (see, as examples, 7 and 10). Role-play tasks provide an additional degree of realism to the situation by actually putting the participants in the situations in which they have to respond, a real-life component lacking in self-report measures. Role-play tasks allow for situations similar to those from which one would collect data in direct, naturalistic observation, but allow for enough control to collect more standard data^[27]. Notably, these are still hypothetical situations and do not assess what adolescents actually do with peers. In contrast, they provide information on the responses that adolescents are able to generate on the spot. As such, they are a useful means for assessing the ability to generate assertive, nonaggressive responses (i.e., socially appropriate) and the ability to generate divergent responses to repeated invitations to engage in problem behaviors.

It should also be noted that, whereas assertiveness and lack of aggression in general as protective factors for engagement in problem behaviors have been examined in urban minority adolescents, a group that has been found to be susceptible to engagement in delinquent behaviors (see, as an

example, ^[28]), few of the studies on responses to peer pressure have used urban, minority adolescent samples (see, as an exception, ^[10]). In addition, research on divergent thinking and production has not included diverse samples, even in its limited scope of application to cognitive and academic domains. As such, research needs to take into account the fact that mechanisms behind problem behaviors for urban, minority adolescents may operate quite differently than the suburban, nonminority youth populations often studied.

Because prior studies have not consistently found that socially appropriate responses necessarily lead to lowered problem behaviors, it is expected that a divergent response strategy may be a better alternative for dealing with peer pressure. This study will test the effects of each strategy type on self-reported delinquency 1 year later.

Methods

Design

The current investigation is a sub-study of a randomized clinical trial designed to evaluate a school-based drug abuse and violence prevention program, which was fully approved by the Institutional Review Board for the Protection of Human Subjects in Research (IRB) at Weill Medical College, Cornell University. The present study was drawn from eight (six parochial, two public) schools from the control condition that volunteered to participate in supplementary data collection activities. Only participants from schools receiving the control condition from the larger prevention study were included, to avoid confounding the present results with potential intervention effects. Students in the control condition received a five-session drug prevention course that included informational (rather than interactional) components only.

Participants

The sample includes 129 middle school children (M age 12.64 [SD .46] years, range 11.47 to 14.53 years in seventh grade) from communities of New York City. Boys comprise half of the sample ($n = 67$; 51.9%), and race is represented primarily by Blacks (48.1%) and Hispanics (28.7%), with all other groups (Whites/Others) comprising 23.2% of the sample. Nearly two-thirds of the adolescents (62.5%) reported living in two-parent homes, with the remainder living in other household configurations. Nearly half of the sample (44.2%) attended public school; however, an overwhelming majority (83%) of White/Other adolescents attended parochial schools, whereas slightly less than half (44%) of Blacks and slightly more than half (54%) of Hispanics attended parochial schools.

The current study uses a subsample of schools that volunteered to participate in additional data collection activities involving videotaped role-play scenarios and structured interviews about hypothetical situations. Owing to the more intensive nature of the additional data collection activities (i.e., videotaping individual students), only the smallest schools (< 150 sixth grade students) from the original study were asked to participate. The majority of small schools were

parochial. Twenty-four schools were asked if they would be part of the substudy, of which 17 (71%) agreed to participate; eight schools were assigned to the control condition. Of those eight control schools, which were used in this study, six (75%) were parochial schools.

The current sample consists of students who completed the social competency assessments in both the seventh and eighth grades. Forty-seven students who participated in seventh did not participate in eighth grade; students were only assessed in eighth grade if they stayed in the same school. ANOVAs were run to test differences on seventh grade variables between those who did and did not participate in eighth grade. No significant differences were found for measures in seventh grade of gender, race, age, whether they live with a nuclear or nonnuclear family, whether they go to public or parochial school, divergent responses, socially appropriate responses, or any of the indicators of delinquency between those who did and did not participate in eighth grade.

Procedures

A passive parental consent procedure explained the nature of the study and provided the opportunity for parents to object to their child's participation. The primary consent form, made available to the full clinical trial sample, provided a comprehensive description of the investigation and the self-report surveys. The subsample of eight schools received a secondary passive consent form that detailed the videotape role-play activities. Both consent forms were distributed to students within the schools, as well as mailed to parents at the students' home address. Parental objection to the primary consent form precluded student participation in all data collection activities. Students in the subsample whose parents objected to the secondary consent form (6%) participated exclusively in the primary task of completing the self-report survey and therefore are not included in the current study; this subsample did not differ from those who completed the secondary data collection in demographics or delinquency.

The procedures for data collection were identical in the seventh and eighth grades. The self-report survey was presented during regularly scheduled 40-minute class periods on two separate days by an ethnically diverse team of three to five data collectors who adhered to a standardized protocol similar to ones used in previous research on drug use and delinquent behaviors^[29]. Use of identification codes (not names) and explicit instruction on the confidential nature of responses maintained the quality of the self-report data by addressing potential concern for privacy.

A third and final day of data collection occurred in the subsample of schools completing the social competency assessment tasks used in the present investigation. Each student completed several videotaped role-play interactions and a series of structured interview questions administered by multi-ethnic (primarily African-American and Hispanic), predominantly female data collectors, though at least one male data collector was sent to each school. Data collectors

were undergraduate and master degree students from local universities, trained for a total of 6 hours over 2 days to administer the role-play prompts in a credible and effective manner.

Before the role-play task, a data collector read relevant instructions to each student individually. Students were informed that they were to act out, as they would in real life, what they would do in the described scenarios, and that they would hear separate instructions before each scenario. Both scenarios measure adolescent ability to refuse peer pressure to engage in a deviant behavior. One role-play task focused on an offer to use drugs (Cigarette Refusal) and the other on a request to shoplift (Sunglasses Refusal). The confederate prompts were standardized for both role-play tasks. The interactions were videotaped for coding purposes.

For Cigarette Refusal, the instructions given individually to each adolescent were: "Pretend you are at a party and practically all the people you are with are smoking cigarettes. Pretend I'm one of your friends." The confederate began with the prompt, "Hey, do you want one?" Regardless of the adolescent's response to this and the following prompts, the confederate continued to prompt: "I thought you were down with this," "Come on, it's no big thing," and "What, are you scared?," pausing between each for adolescents' responses. For Sunglasses Refusal, the instructions were: "You are in a store with a friend, looking around at the merchandise, especially the sunglasses. No one else is near enough to see or hear you. We will pretend to be in that situation, and I'll be your friend." The role-play began with the confederate prompt, "Put these in your bag for me, they're cool." Again, the confederate persisted regardless of the adolescent's responses with: "Come on, everybody lifts things," "What are you afraid of?," and "Nothing's going to happen. I do this all the time." Because they elicit qualitatively different types of responses, limiting the adolescent's response by asking a specific question, the "What, are you scared?" and "What are you afraid of?" prompts are not included for the purposes of this study.

Measures

The videotaped role-play scenarios of refusal skill ability and a self-report survey were used for the purpose of this study. Similar observational methods have been used in previous research^[30]; self-report surveys, specifically for delinquent behaviors, have also been used in previous research and have been found to be reliable and valid^[31].

Demographics

Demographic variables were obtained from the self-report survey. Adolescents were asked to indicate their date-of-birth and gender. For race, adolescents were asked to select a category that "best" described them and given the following choices: Latino/Hispanic; Black/African-American; Asian; American Indian; White; Other (option to write in response). Approximately 77% of the sample was represented by two categories (Latino/Hispanic and Black/African-American), and the remaining categories were collapsed into White/Other. For regression analyses, two variables are used to test race/ethnicity effects: Black/African-American (1) versus all others (0), and Latino/Hispanic (1) versus all others (0); White/Other is the omitted group.

Adolescents were asked to select a response category to reflect with whom they lived “most of the time.” The majority (92%) of adolescents were living in a two-parent (62.5%, with both parents or with one parent and a stepparent) or single-parent (29.5%, with only their mother or only their father) homes, and the remainder were categorized as “other.” For regression analysis, data were collapsed into “two-parent” (1) and “other” (0) household configurations.

Delinquent behaviors

The frequency with which adolescents engaged in acts of delinquency and fighting were assessed with the self-report survey at both seventh and eighth grades. Specifically, for delinquency, adolescents were asked how many times in the past year they had committed specific delinquent behaviors (Table 1). Response options ranged from “Never” (1) to “More than 5 Times” (5). Based on a previous Item Response Theory study on delinquency^[32] and the frequencies of delinquent behaviors, delinquency was broken down into Vandalism (two items), Hitting/Fighting (three items), and Stealing/Shoptlifting (two items; Table 1). Each delinquency variable was dichotomized so that (1) represents at least one delinquent act within that category in the past year and (0) represents no delinquent acts in that category within the past year. In addition, because rates for committing the delinquent acts a single time were relatively high (Table 1), a dichotomous variable that tapped multiple acts of delinquency across all categories (i.e., vandalism, hitting/fighting, and stealing/shoptlifting) was created where (1) represents two or more delinquent acts and (0) represents 1 or no delinquent acts. Table 1 presents frequencies on each of these dichotomized delinquency variables.

Table 1. Delinquent Behavior Survey Items Used and Frequencies

Delinquent Categories and Items	Rates: n (%)	
	7 th Grade	8 th Grade
How many times in the past year have you:		
Vandalism	70 (54.3)	72 (55.8)
Purposely damaged or destroyed property that did not belong to you?		
Intentionally damaged or messed up something in a school or some other building?		
Hitting/fighting	89 (69.0)	92 (71.3)
Picked a fight with someone?		
Hit someone with the idea of seriously hurting them?		
Beat up on someone or fought someone physically if they provoked you (other than just playing around)?		
Stealing/shoptlifting	47 (36.4)	52 (40.3)
Taken something from a store when a clerk wasn't looking?		
Taken something worth less than \$50 that didn't belong to you?		
Multiple acts	86	89

	(66.7)	(69.0)
--	--------	--------

Refusal strategies

In the seventh grade, adolescent responses to each of the three prompts in the two videotaped refusal skill role-plays were coded into categories assessing types of responses. Possible response options to each of the three prompts to engage in delinquent behaviors were: “Simple No” (saying no without saying anything else), “Tell It Like It Is” (using declarative statements that express personal opinions), “Give an Excuse” (offering an excuse why they cannot engage in the behavior), “Offer an Alternative” (giving a prosocial alternative to the behavior), “Stall” (saying no for now but implying possible use in the future), “Cold Shoulder” (ignoring the peer completely), “Reverse the Pressure” (turning pressure back onto the peer by use of sarcasm, name-calling, or suggesting the peer engage in the behavior), “Walk Away” (walking away from the situation), “Accept” (agreeing to the behavior), and “Multiple Responses” (response including multiple categories). Vignettes were ended before the confederate gave all of the prompts in cases where the situation was ended naturally by the adolescent. For example, if an adolescent accepted the cigarette after the first prompt or walked away from the peer in the shoplifting vignette, the confederate would not continue with the successive prompts. See Table 2 for examples of response categories, as well as frequencies of individual response categories within each role-play scenario.

Table 2. Response Types in Role-play Tasks and Frequencies

Response Type	Examples	Rate of Responses			
		n ^a %			
		Cigarette		Sunglasses	
Simple no ^b	No; No thanks	156	42.0	65	19.7
Tell it like it is ^b	No, I don't do that; It's wrong	130	35.0	113	34.2
Give an excuse	It causes cancer; I don't want to get caught	60	16.2	39	11.8
Offer an alternative ^b	No, but I'll pay for them; Let's come back and buy them when we have money	0	0.0	18	5.5
Stall	No, thanks, maybe later; I don't feel like it right now	7	1.9	4	1.2
Cold shoulder	(Ignores)	0	0.0	1	0.3
Reverse the pressure	Why don't you take them; I don't want to and you shouldn't either; Yeah right	16	4.3	68	20.6
Walk away	(Walks away)	2	0.5	0	0.0
Accept	Ok; sure; (mimes taking cigarette)	0	0.0	2	0.6
Multiple responses	So what. I don't want to mess up my lungs (Reverse the pressure/give an excuse)	0	0.0	20	6.1
		286	77.1	196	59.4

^a The n refers to the number of responses given across the 3 prompts and sample. 387 responses were possible for the sample over 3 prompts, however, because some vignettes ended naturally before all prompts could be given, the total number of responses given in each vignette is less than 387. ^b Socially appropriate responses.

This coding scheme for the videotaped role-plays was developed for this project. A “gold standard” coder was designated within the rigorously trained team of seven to eight data coders. Interrater agreement was calculated according to an exact match with gold standard scores on categorical scores. Twenty percent of all vignettes were checked against the gold standard for agreement and coders had to maintain at least 85% agreement. The omnibus interrater agreements for prompt responses were 94% (Kappas = .82-.96) and 94% (Kappas = .88-.95) for the Cigarette Refusal and Sunglasses Refusal, respectively.

Socially appropriate responses

In line with prior studies 13 and 16, socially appropriate responses were defined as demonstrating a direct, assertive refusal of the peer pressure without demonstrating aggression. Simply responding with a direct “no” without any aggressive or sarcastic tone (Simple No) was coded as “socially appropriate.” Additionally, responses that included declarative statements expressing the adolescent’s position (Tell It Like It Is) or offering a socially appropriate alternative to the deviant behavior (Offer an Alternative) were coded as “socially appropriate.” Responses that included any quality of passivity, such as not responding to the pressure honestly and directly (Give an Excuse, Stall) or avoiding confrontation by not engaging the peer in conversation (Cold Shoulder, Walk Away); aggressiveness or sarcasm (Reverse the Pressure); or ineffectiveness in refusing the deviant act (Accept) were not coded as socially appropriate responses. If an adolescent gave a response that contained more than one of the response categories, the response was coded as a “Multiple Response.” Each of the Multiple Responses in this sample included an aggressive or passive component (usually Reverse the Pressure) and was thus coded as a “socially inappropriate” response. According to this definition, 77% of responses given to individual prompts were socially appropriate responses in Cigarette Refusal and 59% of responses given were socially appropriate responses in Sunglasses Refusal.

Adolescents’ socially appropriate responses were dichotomized into high use of socially appropriate responses, which includes adolescents who used these responses greater than 75% of the time (1) when responses were summed across the two situations, and those who used socially appropriate responses less than 75% of the time (0). Less than half (43%) of adolescents were characterized by a high use of socially appropriate responses in the seventh grade role-plays. The cut-off score of 75% was used to identify high use of socially appropriate responses, as the goal of the study was to examine the impact of consistent use of this type of response rather than occasional use.

Divergent responses

Divergent responses were calculated without regard to the appropriateness of individual responses. A divergent response was defined as any refusal response to a prompt to engage in a delinquent behavior (i.e., cigarette use or stealing the sunglasses) whose type had not previously been used in that situation (e.g., if a Simple No was used as the first prompt response, anything except another Simple No would be considered a divergent response). Accepting the offer to smoke or shoplift was not considered a divergent refusal response. Adolescents' divergent responses were dichotomized into high use of divergent responses, which includes adolescents who used divergent responses with each possible refusal opportunity afforded them by the confederate (1) across the two situations, and those who used divergent responses less than every possible time (0). Those adolescents whose vignettes ended naturally before the intended ending (e.g., the adolescent walked away, the confederate not persisting in the pressure) were assessed for divergent responses based on this reduced number of opportunities to refuse. For example, if an adolescent walked away after the second prompt of a vignette that normally had three prompts, but responded with divergent refusal strategies on all possible responses, he or she would be considered highly divergent. Overall, 32 (12.4%) vignettes ended early. Less than a fifth (16%) of the sample was characterized as using a high proportion of divergent responses in the seventh grade role-plays.

High use of socially appropriate responses and high use of divergent responses are not exclusionary: an adolescent high on divergent responses could also be high on socially appropriate responses. Because several types of responses are considered socially appropriate, high use of different socially appropriate responses could categorize an adolescent as high in both categories. Only three students were characterized as high in both categories.

Results

Descriptive information

Table 2 shows frequencies of responses for Cigarette and Sunglasses vignettes. A greater variety of response types was employed in the shoplifting scenario, and more socially appropriate responses were given in the cigarette refusal. A Simple No was used twice as often as a response to the cigarette offer than the request to shoplift, whereas four times as many reverse-the-pressure responses (e.g., "you shouldn't do that") were used in the sunglass scenario than were used in the cigarette. Overall, most adolescents were not highly divergent responders, as indicated by only 16% using divergent responses for every single refusal response. Significantly more adolescents displayed high use of socially appropriate responses across the refusal vignettes than high use of divergent responses ($\chi^2(1) = 6.566, p < .01$). High use of divergent responses, high use of socially appropriate responses, and each of the delinquent behaviors did not vary significantly by gender or race (not shown).

Predictors of delinquent behaviors

A series of logistic regressions was used to test the relationship between seventh grade refusal techniques and eighth grade delinquent behaviors. All individual regression models included demographic variables and the corresponding seventh grade delinquent behavior as control variables in the first block. The second block added high use of divergent responses and high use of socially appropriate responses, respectively, both coded dichotomously. Predictors were reported in terms of their associated odds ratios ($\exp \beta$). Significant results are shown in Table 3.

Table 3. Predictors of Delinquency

Block	Vandalism				Stealing/Shoplifting				Multiple Acts of Delinquency			
	Odds ratio 95% CI				Odds ratio 95% CI				Odds ratio 95% CI			
	Divergent thinking		Socially appropriate responses		Divergent thinking		Socially appropriate responses		Divergent thinking		Socially appropriate responses	
Controls												
Age	1.09	.40-2.92	.76	.30-1.94	2.27	.83-6.19	1.80	.69-4.71	1.15	.39-3.40	.87	.32-2.37
Gender	2.65*	1.10-6.37	2.56*	1.08-6.00	1.16	.48-2.81	1.21	.52-2.83	3.28*	1.24-8.65	3.11*	1.21-7.95
Black	.62	.16-2.43	1.00	.26-3.79	.86	.21-3.52	.91	.23-3.54	.18	.03-1.28	.28	.05-1.64
Hispanic	.47	.11-1.99	.58	.15-2.31	1.76	.40-7.79	1.60	.40-6.44	.24	.03-1.78	.33	.05-2.05
School type	.81	.33-2.01	.72	.30-1.76	.75	.29-1.96	.79	.31-2.00	.87	.33-2.31	.88	.33-2.29
Household	.97	.40-2.33	1.04	.43-2.51	.92	.37-2.28	.83	.34-2.03	.88	.34-2.33	.78	.30-2.02
7 th grade delinquency	4.59*	1.98-10.64	5.14*	2.23-11.86	6.62*	2.72-16.13	6.20*	2.66-14.43	5.74*	2.25-14.65	6.32*	2.53-15.78
Refusal techniques												
Divergent responses	.15**	.04-.55	—	—	.17*	.04-.69	—	—	.20**	.06-.67	—	—
Socially appropriate responses	—	—	2.56*	1.09-5.99	—	—	1.10	.49-2.51	—	—	1.05	.42-2.65
Model χ^2 (df)	30.10 (8)**		25.24 (8)**		31.41 (8)**		23.88 (8)**		33.55 (8)**		26.45 (8)**	
Block 1 χ^2 (df)	20.33 (7)**		20.33 (7)**		23.82 (7)**		23.82 (7)**		26.44 (7)**		26.44 (7)**	
Block 2 χ^2	9.77 (1)**		4.91 (1)*		7.59 (1)**		.05 (1)		7.11 (1)**		.01 (1)	

² (df)						
Nagelkerke's R ²	.286	.245	.302	.237	.337	.273

* $p < .05$. ** $p < .01$.

The probability of committing vandalism at least one time in the eighth grade did not vary by age, race, school type, or household type (Table 3). Boys were more than two and a half times more likely than girls to commit vandalism ($\exp \beta$ ranged from 2.56 to 2.65, depending on the model), and adolescents who had committed vandalism in the seventh grade were five times more likely to commit vandalism than those who had not ($\exp \beta$ ranged from 4.59 to 5.14). Adolescents displaying high use of divergent responses in the seventh grade were six and a half times less likely than those not demonstrating high divergence to commit vandalism in eighth grade ($\exp \beta = .15$). Adolescents who exhibited high use of socially appropriate responses to peer pressure in the seventh grade were about two and a half times more likely to commit vandalism ($\exp \beta = 2.56$).

The probability of either hitting or fighting at least once in the eighth grade did not vary by gender, race, age, school type, or household type. Adolescents who hit or fought in the seventh grade were three times more likely to hit or fight again in the eighth grade ($\exp \beta$ ranged from 2.97 to 3.07). The seventh grade use of high divergent responses and socially appropriate responses were not significant predictors of fighting or hitting in the eighth grade.

As shown in Table 3, the probability of committing at least one act of stealing or shoplifting in the eighth grade did not differ by age, gender, race, school type, or household type. Adolescents who had stolen or shoplifted in the seventh grade were more than six times more likely to do so again in the eighth grade ($\exp \beta$ ranged from 6.20 to 6.62). Adolescents with high divergent response use in the seventh grade were nearly six times less likely to steal or shoplift in the eighth grade ($\exp \beta = .17$). Seventh grade high use of socially appropriate responses was not a significant predictor of committing an act of stealing or shoplifting in the eighth grade.

As shown in Table 3, the probability of committing more than one act of any type of delinquency in the eighth grade did not differ by age, race, school type, or household type. However, boys were three times more likely to commit multiple delinquent acts ($\exp \beta$ ranged from 3.11 to 3.28), and adolescents who had committed multiple acts of delinquency in the seventh grade were six times more likely than those who had not to commit multiple acts in the eighth grade ($\exp \beta$ ranged from 5.74 to 6.32). For multiple acts of delinquency, adolescents displaying high divergent responses in the seventh grade were five times less likely to commit multiple delinquent acts in the eighth grade ($\exp \beta = .20$). Use of socially appropriate responses was not a significant predictor of committing multiple acts of delinquency.

Interaction tests by gender (not shown) showed that divergent responses and socially appropriate responses did not operate differently for boys and girls for any of the delinquent behaviors.

Interaction tests by race (not shown) showed similarly that divergent responses and socially appropriate responses did not affect different races differently on any of the outcome behaviors. Additional tests with both divergent and socially appropriate responses in the same model were run, including an interaction term between the two refusal strategies (not shown). Results did not change for any model, and the interaction did not offer a significant predictor of any delinquent behavior. As such, separate models are presented.

Discussion

The data from the present study indicate that the ability to use divergent responses in peer pressure situations may be a better tool for resisting that pressure than the ability to use what can be called socially appropriate, assertive, nonaggressive responses touted by many prevention programs. High use of divergent thinking in response to hypothetical peer pressure scenarios to engage in deviant acts was consistently associated with a lower likelihood of committing delinquent acts a year later, having controlled for baseline delinquency. Specifically, adolescents who used a high proportion of divergent responses in the seventh grade were much less likely to vandalize property, steal or shoplift, and commit multiple acts of any type of delinquency a year later, controlling for seventh grade delinquency, than those who did not. At the same time, there is little indication that assertive, nonaggressive responses to the hypothetical peer pressure situations are linked at all to subsequent behavioral choices, even though many youth provide these responses.

Perhaps most interesting were the results for vandalism. Use of divergent responses in the seventh grade was associated strongly with lower rates of vandalism over time (in eighth grade). Those adolescents who used a high degree of socially appropriate responses in the seventh grade were actually more likely to commit vandalism over time. Wills et al ^[10] found that assertiveness was associated with lowered delinquency in the form of drug use in urban, minority adolescents, as well as white suburban adolescents, but this association was noted only for refusal assertiveness specific to the individual delinquent behavior. In their study, general assertiveness was not associated with delinquent behaviors, whereas social assertiveness and dating assertiveness were positively associated with delinquent behaviors. It may be that greater ability in certain components of assertiveness in certain situations is indicative of being more socially precocious, which is then associated with greater involvement in acts of deviance.

Studies linking social skills, such as assertiveness in social situations, to behaviors have found that socially appropriate responses are associated with lower aggression, and low aggression has been associated with increased impulse control 6 and 7; these studies, however, did not examine urban, minority adolescents. Also, these studies did not use behavioral observation of peer pressure situations; rather, they used teacher- and self-reports. In the present sample of urban middle school students, lack of aggression in verbal responses to peer pressure (i.e., socially appropriate responses) was less protective against rates of vandalism, a form of delinquency that does not involve interpersonal violence. Thus some aggression (or possibly passivity) may be

beneficial when dealing with peer pressure to vandalize property. It may be that peer pressure situations around vandalism (which were not included in the present study) are qualitatively different and require a different type of response to be effective than situations that are either inherently violent (such as hitting and fighting) or neither violent nor aggressive (such as shoplifting). Our finding suggests that contexts are highly specific and should be so treated.

As indicated, similar effects for divergent response use are seen for stealing/shoplifting. Over time, the high divergent response-using adolescents were much less likely to steal or shoplift. No previous research has looked at divergent responses to peer pressure and stealing or shoplifting, however these findings are in line with Kagan's ^[22] research linking divergent thinking and social competency in general, even though in that study divergent thinking was measured by standardized tests and not within actual social situations. In contrast, stealing or shoplifting rates did not vary by amount of assertive, nonaggressive responses to the seventh grade peer pressure situations over time. Stealing and shoplifting, as compared with hitting, fighting, and vandalism, can be categorized as nonviolent, nonaggressive delinquent acts. Peer pressure situations involving these nonaggressive acts may be quite different than those that involve violent or aggressive deviant acts. Social skills like assertiveness have previously been associated with lower rates of stealing ^[6], though most of the studies reviewed were either disordered or nonminority populations. Unlike the aggressive yet nonviolent aspects of vandalism, this situation does not seem to be influenced by aggressive or assertive responses, and it seems adolescents who use a great deal of divergent responses in these situations are less likely to commit these delinquent acts.

The benefits of divergent thinking are not as clearly demonstrated for hitting/fighting. At the same time, socially appropriate responses were not protective against engagement in these behaviors either. For hitting and fighting, again, those adolescents who used many divergent responses in the seventh grade peer pressure situations were marginally less likely to hit or fight than their counterparts in the eighth grade. Although the most effective response type to peer pressure for this violent delinquent act is unclear, the assertive, nonaggressive responses (i.e., socially appropriate) were not very effective. Social skills training has been used to lower violence in high-risk urban adolescent populations ^[5], and it is unclear why these theoretically optimal responses to peer pressure, grounded in socially preferred skills, in this sample were ineffective at buffering violence. It is possible that not engaging in the pressure situation at all, giving the cold shoulder or walking away, may be the most appropriate response type for pressure to hit and fight. The current sample, however, had such low rates of both of these response types in the scenarios used that this idea could not be tested. It should be noted that peer pressure dynamics are likely more complex in a fighting scenario than in shoplifting or cigarette use. For the latter, the peer who is involved is a friend or someone with whom the adolescent has chosen to associate and that person encourages the adolescent to engage in a bad behavior. The present investigation did not model a "fighting" scenario. As such, it may be that the repertoire of techniques that even divergent thinkers have in seventh grade are not sufficient for effective

solutions to these more complex peer dynamics that also usually include heightened demands on emotion regulation (e.g., anger management) and that are increasingly associated with issues of status among young urban youth.

Donovan and Jessor^[33] suggested that, because of the high intercorrelation between different types of delinquent acts, there might be a “behavior problems syndrome,” a tendency for individuals to commit multiple delinquent behaviors. Multiple acts of delinquency, either committing the same act multiple times or committing more than one type of delinquency, may be the true marker of maladaptive behavior. Numerous studies have tested this hypothesis and in particular, the extent to which behaviors hang together in different race and ethnic groups or for urban versus suburban youth 34 and 35. The present investigation focused on various delinquent behaviors in an urban, minority sample, which were indeed highly intercorrelated. Assertive, nonaggressive responses to peer pressure in the seventh grade were not a protective factor against committing multiple acts of delinquency in the eighth grade; divergent response use, however, was protective. Whereas one act of delinquency could arguably be considered experimentation, committing multiple acts of delinquency is more likely to be a problem behavior.

Limitations

There are several limitations of the present study. Because an urban, minority adolescent sample was examined, results from the present study may not generalize to other groups of adolescents. Future studies should include larger sample sizes to allow for greater comparisons across racial/ethnic groups. Additionally, the sample studied was a sample of convenience, as only the smallest schools from the larger study, and only those that volunteered for the additional data collection of the substudy were included. A distinct methodological constraint is the use of self-reported delinquent behavior variables. Future research should include multiple reports or reporters of delinquent behaviors. The use of a correlational design, meant to establish associations between perceived behaviors and self-reported behaviors, also limits the conclusions that can be drawn from the present study. Additionally, factors other than the verbal responses to peer pressure may be important in determining what is effective in particular situations. Moreover, several confounding factors may be present in this situation; namely, intelligence, which was not measured in the present study, may be related to both the divergent production of responses as measured in the present study (i.e., by nonstandard assessments) and lower delinquency. Analyses were conducted looking at self-reported grades in school. High use of divergent responses was associated with higher grades, whereas use of socially appropriate responses was not associated with grades. Conducting analyses with grades as a covariate, however, did not change the results significantly. Grades, however, are not solely reflective of ability or intelligence, but, again, a direct measure of intelligence was not included.

Conclusions

The results from this study suggest that the term “peer pressure situations” may not be specific enough as a context, as it seems that specific behaviors may be differentially effective in much more specific contexts, such as “situations of peer pressure to commit acts of vandalism.” For the specific situations explored in this study, the assertive, nonaggressive responses to peer pressure touted by many primary prevention education programs were not effective in any circumstance. Divergent thinking in peer pressure situations may work for several reasons. Adolescents who employ divergent response types to peer pressure may simply come across an effective one eventually (whether it is the “socially appropriate” assertive, nonaggressive type or not). Additionally, using different techniques to evade peer pressure may convey to peers a more adamant stance against committing whatever act is being pressured.

Acknowledgements

Preparation of this manuscript was supported in part by a grant to Dr. Gilbert J. Botvin from the National Institute on Drug Abuse (P50DA-07656).

References

1. Crick NR, Dodge KA. A review and reformulation of social information-processing mechanisms in children’s social adjustment. *Psychol Bull* 1994;115:74 –101.
2. Dodge KA, Pettit G, McClaskey C, Brown M. Social competence in children. *Monogr Soc Res Child Dev* 1986;58:213–51.
3. Caldarella P, Merrell KW. Common dimensions of social skills of children and adolescents: A taxonomy of positive behaviors. *School Psych Rev* 1997;26:264 –78.
4. Battjes RJ. Prevention of adolescent drug abuse. *Int J Addict* 1985;20:1113–34.
5. Meyer AL, Farrell AD. Social skills training to promote resilience in urban sixth-grade students: One product of an action research strategy to prevent youth violence in high-risk environments. *Educ Treat Child* 1998;21:461–88.
6. Pentz MA. Prevention of adolescent substance abuse through social skill development. In: Glynn TJ, Leukefeld CG, Ludford JB (eds). *Preventing Adolescent Drug Abuse: Intervention Strategies* (National Institute on Drug Abuse Research Monograph 47, DHHS Pub. No. (ADM)83-1280). Washington, DC: US Government Printing Office, 1985:195–232.
7. Caplan M, Weissberg RP, Grober JS, et al. Social competence promotion with inner-city and suburban young adolescents: Effects on social adjustment and alcohol use. *J Consult Clin Psychol* 1992;60:56 –63.

8. Dodge KA, Coie J. Social information processing factors in reactive and proactive aggression in children's peer groups. *J Pers Soc Psychol* 1987;53:1146–58.
9. Eisenberg N, Fabes RA. Emotion, regulation, and the development of social competence. In: Clark MS (ed). *Review of Personality and Social Psychology*. Volume 14: Emotion and Social Behavior. Newbury Park, CA: Sage, 1992:119–50.
10. Wills TA, Baker E, Botvin GJ. Dimensions of assertiveness: Differential relationships to substance use in early adolescence. *J Consult Clin Psychol* 1989;57:473–8.
11. Lange AJ, Jakubowski P. *Responsible Assertive Behavior: Cognitive/behavioral Techniques for Trainers*. Champaign, IL: Research Press, 1976.
12. Scheier LM, Botvin GJ. Relations to social efficacy, personal competence, and adolescent alcohol use: A developmental exploratory study. *J Early Adolesc* 1998;18:77–114.
13. Wills TA. Stress and coping in early adolescence: Relationships to substance use in urban school samples. *Health Psychol* 1986;5:503–29.
14. Pentz MA. Social competence and self-efficacy as determinants of substance use in adolescence. In: Shiffman S, Wills TA (eds). *Coping and Substance Use*. New York: Academic Press, 1985:117–42.
15. Miller MA, Alberts JK, Hecht ML, et al. *Adolescent Relationships and Drug Use*. Mahwah, NJ: Lawrence Erlbaum Associates, 2000.
16. Turner GE, Burciaga C, Sussman S, Klein-Selski E. Which lesson components mediate refusal assertion skill improvement in school-based adolescent tobacco use prevention? *Int J Addict* 1993;28:749–63.
17. Sallis JF, Elder JP, Wildey MB, et al. Assessing skills for refusing cigarettes and smokeless tobacco. *J Behav Med* 1990; 13:489–503.
18. Alberts JK, Hecht ML, Miller-Rassulo M, Krizek RL. The communicative process of drug resistance among high school students. *J Adolesc* 1992;27:203–26.
19. Hops H, Weissman W, Biglan A, et al. A taped situation test of cigarette refusal skill among adolescents. *Behav Assess* 1986; 8:145–54.
20. Bejat M. Experimental data on the relationships between some intellectual skills, intelligence and creativity in problem solving. *Rev Roum Sci Soc (Psychol)* 1971;15:187–96.
21. Engelmann PD, Gettys CF. Divergent thinking in act generation. *Acta Psychol (Amst)* 1985;60:39–56.

22. Kagan DM. Measurements of divergent and complex thinking. *Educ Psychol Meas* 1988;48:873–84.
23. Pellegrini D, Masten A, Garmezy N, Ferrarese M. Correlates of social and academic competence in middle childhood. *J Child Psychol Psychiatry* 1987;28:699–714.
24. Delia JG, Clark RA. Cognitive complexity, social perception, and the development of listener-adapted communication in six-, eight-, ten-, and twelve-year-old boys. *Commun Monogr* 1977;44:326–45.
25. Cavell TA. Social adjustment, social performance, and social skills: A tri-component model of social competence. *J Clin Child Psychol* 1990;19:111–22.
26. Masten AS, Coatsworth JD, Neemann J, et al. The structure and coherence of competence from childhood through adolescence. *Child Dev* 1995;66:1635–59.
27. Foster SL, Inderbitzen HM, Nangle DW. Assessing acceptance and social skills with peers in childhood: Current issues. *Behav Modif* 1993;17:255–86.
28. Pinderhughes EE, Nix R, Foster EM, Jones D. Parenting in context: Impact of neighborhood poverty, residential stability, public services, social networks, and danger on parental behaviors. *J Marriage Fam* 2001;63:941–53.
29. Botvin GJ, Schinke SP, Epstein JE, Diaz T. The effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority youth. *Psychol Addict Behav* 1994;8:116–27.
30. Rudolph KD, Hammen C, Burge D. Cognitive representations of self, family, and peers in school-age children: Links with social competence and sociometric status. *Child Dev* 1995;66:1385–402.
31. Rutter M, Giller H, Hagell A. *Antisocial Behavior by Young People*. New York: Cambridge University Press, 1998.
32. Leung K, Drasgow F. Relation between self-esteem and delinquent behavior in three ethnic groups: An application of item response theory. *J Cross Cult Psychol* 1986;17:151–67.
33. Donovan JE, Jessor R. Structure of delinquent behavior in adolescence and young adulthood. *J Consult Clin Psychol* 1985;53:890–904.
34. Chavez EL, Edwards R, Oetting ER. Mexican American and white American school dropouts' drug use, health status, and involvement in violence. *Public Health Rep* 1989;104: 594–604.

35. Flisher AJ, Kramer RA, Hoven CW, et al. Risk behavior in a community sample of children and adolescents. *J Am Acad Child Adolesc Psychiatry* 2000;39:881-7.