Journal of Youth and Adolescence, Vol. 29, No. 2, 2000

Measuring Peer Pressure, Popularity, and Conformity in Adolescent Boys and Girls: Predicting School Performance, Sexual Attitudes, and Substance Abuse

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Received April 25, 1998; accepted November 22, 1999

*Existing measures of peer pressure and conformity may not be suitable for screening large numbers of adolescents efficiently, and few studies have differentiated peer pressure from theoretically related constructs, such as conformity or wanting to be popular. We developed and validated short measures of peer pressure, peer conformity, and popularity in a sample (*n = *148) of adolescent boys and girls in grades 11 to 13. Results showed that all measures constructed for the study were internally consistent. Although all measures of peer pressure, conformity, and popularity were intercorrelated, peer pressure and peer conformity were stronger predictors of risk behaviors than measures assessing popularity, general conformity, or dysphoria. Despite a simplified scoring format, peer conformity vignettes were equal to if not better than the peer pressure measures in predicting risk behavior. Findings suggest that peer pressure and peer conformity are potentially greater risk factors than a need to be popular, and that both peer pressure and peer conformity can be measured with short scales suitable for large-scale testing.*

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0047-2891/00/0400-0163$18.00/0

INTRODUCTION

Becoming a member of a peer group is one of the primary developmental tasks of adolescence (Bourne, 1978; Coleman and Hendry, 1990; Erikson, 1968). Peer groups influence adolescent socialization and identity by allowing young persons to explore individual interests and uncertainties while retaining a sense of belonging and continuity within a group of friends (Erikson, 1968; Hartup, 1983; Steinberg and Silverberg, 1987). Although a key aspect of normal adolescent development, there may be costs associated with becoming a member of a group of people. Some have considered peer pressure the "price of group membership" (Clasen and Brown, 1985), which research has linked to a variety of potential problems, including substance abuse (Bauman and Ennett, 1996; Robin and Johnson, 1996; Hawkins, 1982), risk-taking behavior and delinquency (Keena, Loeber, Zhang, and Stouthamer, 1995), as well as dating attitudes and sexual behavior (Newcomer, Udry, and Cameron, 1983). Belonging to a group requires conformity to group interests and desires, which may not be strictly a matter of individual preference. For many young persons, substance use, risk-taking behavior, and sexual activity may represent efforts to "conform to the norms of the group and to demonstrate commitment and loyalty to other group members" (Newman and Newman, 1976, p. 276).

Despite the large number of studies examining peer pressure, most research has focused on examining how peer pressure is related to well-being and risk behavior, rather than on identifying the key features of peer pressure that account for these relations. Indeed, the manner in which peer pressure has been defined and operationalized has varied greatly across studies. Peer pressure is often operationalized simply as the extent to which behavior among friends is correlated (Ide, Parkerson, Haertel, and Walberg, 1981; Robin and Johnson, 1991) rather than the degree to which individuals feel pressured to act or think in certain ways (Brown *et al.*, 1986). In many studies, it is unclear to what extent peer pressure is distinguishable from related constructs such as peer conformity or conformity. As a result, the manner in which peer pressure is related to potential risk factors and psychosocial problems is somewhat unclear.

One of the most well-validated measures of peer pressure was developed and validated by Brown and Clasen (Brown, Clasen, and Eicher, 1986; Clasen and Brown, 1985). The Peer Pressure Inventory (PPI) was designed to assess the perception of peer pressure in a number of domains, including peer social activities, misconduct, conformity to peer norms, involvement in school, and involvement with family. Peer pressure was defined explicitly as "when people your own age encourage you to do something or to keep from doing something else, no matter if you personally want to or not" (Brown, 1986, p. 522). Young people are required to assess 53 items on a 7-point scale indicating whether they feel pressure toward or away from a number of activities (e.g., "be social, do things with other people"

versus "not be social, do things by yourself") and to what degree. Research has shown that the scale is valid, reliable, and internally consistent and that high scores on the scale are related to involvement in peer activities, antisocial activities, and misconduct (Brown, 1986).

The key feature of this definition of peer pressure is that individuals in your own age group are *actively* encouraging or urging you to do something. Clearly, the central feature of most notions of peer pressure is that individuals are motivated to act and think in certain ways because they have been urged, encouraged, or pressured by a peer to do so. However, there are a number of related concepts from which peer pressure should be differentiated. Brown and his colleagues (Brown *et al.*, 1986) differentiated peer pressure from peer conformity. For Brown and his colleagues, peer pressure represents an attitude or perception, whereas peer conformity represents a behavioral disposition. Brendt (1979) devised a scale consisting of 20 hypothetical situations in which "a couple of your best friends" urge participation in a certain activity and the participant is portrayed either as reluctant to join peers in the activity or as eager to engage in that activity. For each situation, participants indicate what they would really do on a 6-point scale ranging from "absolutely sure" of nonconformity to "absolutely sure" of conformity. The scale consists of 10 antisocial situations and 10 neutral situations. This measure has been widely used in a number of studies assessing peer conformity (Brown, 1986) and susceptibility to peer pressure (Steinberg and Silverberg, 1987).

Although a large number of studies have examined peer pressure and peer conformity, few studies have evaluated the degree to which peer pressure or peer conformity are related to or are different from more general tendencies to conform to authority. That is, susceptibility to peer pressure may reflect a broader unwillingness to conform to authority which may constitute a protective factor against the effects of peer pressure. In addition, acting and thinking in certain ways because of peer pressure is conceptually distinct from acting in certain ways because of a desire to be popular with others. Clearly, both constructs are likely to be related; however, peer pressure implies one is being urged to do something, whereas wanting to be popular need not involve feeling pressured by a peer. That is, peer pressure concerns the influence of individuals in the group with which one identifies and of which one wants to be a member; being popular involves being recognized or liked by a group of individuals. Although related, it is unclear whether peer pressure, peer conformity, and popularity are equally related to well-being and potential psychosocial difficulties, including substance use, risk-taking behavior, as well as dating attitudes, sexual behavior, and school performance.

Accordingly, one purpose of the present study was to examine how related constructs, such as popularity and conformity, are related to peer pressure, and how these related constructs are associated with risk behavior. A second purpose of the present study was to develop and validate shorter measures of peer pressure and peer conformity, each with about 10 items, suitable for use in screening large

numbers of adolescents. Assessing peer pressure in large groups of young persons requires a short, valid, and reliable measure that can be administered efficiently.

Although research has shown that both peer pressure and peer conformity are related to involvement in peer activities, antisocial activities, and misconduct (Brown, 1986), concern has been raised concerning the length and content of both the Peer Pressure Inventory (Brown *et al.*, 1986) and the conformity vignettes developed by Brendt (1979). Because the Peer Pressure Inventory was designed to assess peer pressure in different domains, the measure is somewhat long—53 items. For this reason, Brown *et al.* (1986) elected not to administer the measure to sixth grade students. In addition, pilot testing in the study conducted by Brown and his colleagues (Brown *et al.*, 1986) indicated that some participants had difficulty with some of the hypothetical situations originally developed by Brendt (1979) some 20 years ago.

Construct Definition

Peer Pressure

Consistent with Brown *et al.* (1986), peer pressure was formulated as a subjective experience of feeling pressured, urged, or dared by others to do certain things or actually doing particular things because others have pressured, urged, or dared you to. Central to this construct is the notion that the individuals experience pressure from peers to do certain things. Like most measures of peer pressure, our measure assessed a number of delinquent behaviors, such as substance use, skipping classes, and theft. However, we also included a number of items that made no reference to inherently antisocial behavior, such as being pushed into anything (see Appendix). Because some content overlap exists between some items on the peer pressure inventory and the self-report measure of behavior we used to examine risk behavior, we also examined the relation between peer pressure items that did not explicitly refer to behaviors also listed on the self-report measure of behavior.

Popularity

The popularity scale was developed in order to differentiate feeling urged or pressured to do things from doing certain things in order to be viewed as popular with friends. Because both peer pressure and the need to be popular are related to being accepted by the same peer group, we anticipated that peer pressure and popularity would be correlated. However, peer pressure refers to more specific situations in which individuals feel they are being pressured, whereas the need to be popular refers to a broader class of situations in which individuals may or may not be directly pressured to act or think in a certain way. We anticipated that

both constructs would be related to risk behavior; however, we had no *a priori* hypotheses concerning how strongly these constructs would be correlated or how associations with measures of behavior would differ.

Peer Conformity

Peer conformity assesses whether or not individuals adopt a certain course of action sanctioned by their peer group. This measure is best viewed as a measure of behavioral dispositions (cf. Brown *et al.*, 1986) rather than as a measure assessing the extent to which individuals experience peer pressure in such situations. Similar to Brendt (1979), we constructed a number of vignettes that referred to explicitly antisocial activities, such as theft, cheating on a test, driving home drunk, as well as a number of more neutral activities, such as smoking, dieting, missing your friend's party, and joining a club. The vignettes originally developed by Brendt (1979) were scored on a 6-point scale, ranging from "absolutely sure" of nonconformity to "absolutely sure" of conformity. However, to facilitate the use of vignettes in adolescents, we simplified the scoring format and wrote new vignettes. Unlike, the measure developed by Brendt (1979), situations for the measure we developed were scored dichotomously to facilitate its use among young persons. Participants were only required to indicate what course of action they would choose. We also asked participants to indicate whether they have ever experienced a situation similar to one described in the vignette. One of the most important issues involved with the use of hypothetical situations concerns the appropriateness of the vignettes. Although the vignettes were presented as hypothetical situations, we anticipated that a substantial number of young persons would have experienced the events described in the vignette.

General Conformity

We also included 5 items assessing the extent to which individuals conform to authority in general. Constructs, such as Peer Pressure, Popularity, and Peer Conformity, are believed to be specific to peer situations rather than reflect more general dispositions. However, few if any construct validation studies have evaluated the divergent validity between peer pressure and peer conformity constructs and a general conformity to authority. We anticipated that General Conformity Items would be negatively associated with measures of Peer Pressure, Popularity, and Peer Conformity and that the strength of the relation would be stronger with Peer Pressure and Peer Conformity measures than with the Popularity Measure. We also anticipated that General Conformity Items would be negatively related to many of the self-report behavioral items, such as substance use, skipping classes, and theft.

Overview

In summary, one goal of the research was to develop short measures of peer pressure and peer conformity that may be administered quickly and efficiently to young adolescents and to examine their relationship with conceptually distinct constructs, such as need for popularity and conformity to authority. A second goal of the study was to evaluate the degree to which these different constructs are related to risk behaviors, well-being, and potential psychosocial difficulties, including substance use, risk-taking behavior, and delinquency, as well as dating attitudes, sexual behavior, and school performance. Convergent and divergent validity was assessed by examining correlations between peer pressure and peer conformity measures and measures of need for popularity, conformity to authority, self-esteem, and depressive mood. Predictive validity was assessed by examining correlations that peer pressure, peer conformity, need for popularity, and conformity to authority, self-esteem, and depressive mood have with potential psychosocial difficulties, such as substance use and poor school performance.

METHOD

Subjects

Students were recruited through various announcements posted throughout a local high school and were paid $5 for completing a questionnaire. Questionnaires were completed in groups of 20 to 25 students in designated testing areas, each supervised by two research assistants. Parental consent was requested but not required for participation in the study. Forty adolescent boys and 105 adolescent girls, in grades 11 and 12, aged 16 to 18, completed questionnaires. The sample was ethnically diverse: approximately 70% of the sample was White, 25% of the sample was Black, and 5% of the sample consisted of other ethnic groups. Questionnaires included measures of well-being, school performance, sexual attitudes and behavior, as well as measures of substance use and the measures of peer pressure constructed specifically for this study. Well-being and Behavioral Measures preceded the Peer Pressure, Popularity, Peer Conformity, and the general Conformity measure.

Dependent Measures

Analyses involved four groups of measures: (a) peer pressure and related measures described previously, namely the Peer Pressure, Popularity, Peer Conformity, and General Conformity Items; (b) well-being measures, including measures of self-esteem and dysphoria; and (c) risk behavior measures, including substance

use, attitudes towards sex, and school performance. Analyses were divided into two sections, those evaluating the reliability and interrelation of peer pressure and conformity measures and those evaluating the relation that peer pressure and conformity measures have with well-being and behavior measures. Construction of the Peer Pressure, Popularity, Peer Conformity, and General Conformity Items was described previously. Items for all measures developed for the study appear in Table I and in the Appendix.

Measures of Well-Being

Well-being was evaluated with a measure of dysphoria. Dysphoria was assessed with the Beck Depression Inventory (Beck, which is a widely used 21-item inventory of cognitive and somatic symptoms of depression. Extensive research demonstrates that BDI is a reliable and valid measure of depressive severity (see Beck, Steer, and Garbin, 1988, for a review). Psychometric analyses based on item response theory have shown that the BDI effectively discriminates individual differences in depressive severity while demonstrating minimal gender item-bias (Santor, Ramsay, and Zuroff, 1994).

Self-Report Behavioral Measures

A questionnaire was developed in which participants answered a number of questions assessing school performance, substance use, and theft, as well as dating and sexual behavior. *School Performance Items* included: numerical English and Math Grades from the Fall school semester, and Number of Classes Missed (for which the school would have expected you to be present). *Substance Use Items* included: Beer Consumption (number of bottles of beer consumed in a typical month), Alcohol Consumption (number of glasses of wine and/or spirits consumed in a typical month), Cigarette Consumption (number of cigarettes smoked in a typical week), Number of Times Drunk (since the beginning of the current school year), Number of Soft Drugs Ever Used (since September), Number of Hard Drugs Ever Used (since September), Number of Soft Drugs Used more than five times (since September), Number of Hard Drugs Used more than five times (since September). Soft Drugs included marijuana, hash, mushrooms, pain killers (in order to get high), inhalants, Ritalin (for nonmedical reasons), ecstasy, herbal ecstasy, and tranquilizers. Hard Drugs included crack, cocaine, heroin, mescaline, speed, LSD, and PCP. *Sexual Attitudes and Behavior Items* included: Number of Sexual Partners since the beginning of the school year, scored on a 3-point scale including “0,” “1,” and “2 or more,” Number of Boyfriends/Girlfriends (you have gone out with on a date at least three times since the beginning of the school year), and Sexual Attitudes. Sexual Attitude Items included interest in having sex in general, willingness to have sex if you were with the right person, willingness

Table I. Peer Pressure, Conformity, and Popularity Items

	Pressure Scale	Popularity Scale	Conformity Scale
Peer Pressure Items			
My friends could push me into doing just about anything.	.52[e]	.43[e]	−.14
I give into peer pressure easily.	.56[e]	.47[e]	−.03
When at school, if a group of people asked me to do something, it would be hard to say no.	.54[e]	.56[e]	−.16
At times, I've broken rules because others have urged me to.	.66[e]	.43[e]	−.27[d]
At times, I've done dangerous or foolish things because others dared me to.	.58[e]	.39[e]	−.32[e]
I often feel pressured to do things I wouldn't normally do.	.57[e]	.61[e]	−.22[c]
If my friends are drinking, it would be hard for me to resist having a drink.	.55[e]	.28[d]	−22[c]
I've skipped classes, when others have urged me to.	.58[e]	.31[d]	−.15
I've felt pressured to have sex, because a lot of people my own age have already had sex.	.66[e]	.50[e]	−.25[c]
I've felt pressured to get drunk at parties.	.63[e]	.45[e]	−.16
At times I've felt pressured to do drugs, because others have urged me too.	.70[e]	.45[e]	−.16
Popularity Items			
I have done things to make me more popular, even when it meant doing something I would not usually do.	.49[e]	.63[e]	−.15
I've neglected some friends because of what other people might think.	.43[e]	.58[e]	−.08
At times, I've ignored some people in order to be more popular with others.	.52[e]	.68[e]	−.04
I'd do almost anything to avoid being seen as a "loser."	.36[e]	.61[e]	−.05
It's important that people think I'm popular.	.35[e]	.62[e]	−.12
At times, I've gone out with people, just because they were popular.	.50[e]	.61[e]	−.23[c]
I've bought things, because they were the "in" things to have.	.48[e]	.68[e]	−.08
At times, I've changed the way I dress in order to be more popular.	.49[e]	.70[e]	−.07
I've been friends with some people, just because others liked them.	.47[e]	.65[e]	−.07
I've gone to parties, just to be part of the crowd.	.50[e]	.64[e]	−.08
I often do things just to be popular with people at school.	.54[e]	.74[e]	−.12
At times, I've hung out with some people, so others wouldn't think I was unpopular.	.43[e]	.60[e]	−.04
Conformity Items			
If a teacher asks me to do something, I usually do it.	−.19[b]	−.19[b]	.47[e]
I usually do what I am told.	−.22[c]	−.13	.75[e]
I usually obey my parents.	−.20[b]	−.14	.73[e]
I follow my parents' wishes even when it means not doing something I want to do.	−.14	−.03	.68[e]
Even when I disagree with my parents' wishes, I usually do what I am told.	−.08	−.02	.68[e]
I break rules frequently.[a]	−.43[e]	−.21	.66[e]
I rarely follow the rules.[a]	−.34[e]	−.15	.73[e]

[a] These items were reverse scored.
[b] $p < .02$.
[c] $p < .01$.
[d] $p < .001$.
[e] $p < .0001$.

to have sex with a boyfriend or girlfriend even if you didn't want to, and feeling pressured to have sex with someone. Sexual Attitude Items were answered on a 7-point scale ranging from "Definitely Not" to "Definitely Yes" and were summed to create on overall measure of Sexual Attitudes towards having sex.

RESULTS

Results are presented in four sections. First, psychometric properties and bivariate correlations for the various measures of peer pressure, popularity and conformity constructed for the present study are reported. Second, univariate statistics for the various dependent measures assessed in this study are presented for adolescent boys and girls separately. Third, correlations between measures of peer pressure, popularity, and conformity and measures of risk behavior and psychological functioning are presented.

Psychometric Properties of Measures

Items for the peer pressure, peer conformity, popularity, and conformity scales were selected from the initial pool of items on the basis of their item-total correlations. Item-total correlations for items correlated with the intended content scale were based on total scores less the value of the item, whereas item-total correlations for items correlated with other content scales were based on full total scores. Items not correlating more than 0.40 with the content scale for which the item was written were deleted. Results for the Peer Pressure, Popularity, and Conformity Scales are presented in Table I. Results showed that items from both the peer pressure and peer conformity scales correlated with total scores from both measures. This indicates strong convergent validity for the peer pressure and popularity scales and suggests that the constructs are related. Results also showed that most correlations between items from the Peer Pressure and Popularity Scales were not significantly correlated with the Conformity Scale. When items did correlate with the Conformity Scale, correlations were negative and moderate in size, as anticipated. This indicates that peer pressure and popularity are different from a disposition to conform in general.

Vignettes for the Peer Conformity Scale were selected from the initial pool of vignettes on the basis of their item-total correlations. As before, item-total correlations for items correlated with the intended content scale were based on total scores less the value of the item, whereas item-total correlations for items correlated with other content scales were based on full total scores. Given that item-total correlations for the vignettes were based on biserial correlations (vignettes were scored dichotomously), we anticipated that item-total correlations would be smaller in magnitude. Accordingly, vignettes not correlating more than 0.25 with

Table II. Peer Conformity Vignettes

	Item-Total Correlations	Conformity Scale	Percentage of Participants Experiencing Situation
1. Going to the party being held by the more popular person instead of your friend's party.	.29[c]	−.18	57
2. Skipping classes at school to go downtown with your friends.	.26[b]	−.36[b]	80
3. Attending a concert with your friend instead of studying for a test.	.33[b]	−.09	56
4. Being pressured into having intercourse in order to be popular.	.50[c]	−.29[b]	27
5. Stealing something from a store because your friends have.	.32[b]	−.26[a]	58
6. Driving home drunk because your friends urge you to drive.	.44[c]	−.29[b]	79
7. Swallowing goldfish and dying your hair to become a member of a particular club or team.	.45[c]	−.04	24
8. Smoking pot because everyone else is.	.29[b]	−.33[b]	63
9. Being expected to start a fire even though you are terrified of fires.	.29[b]	−.24[a]	21
10. Having a cigarette when you discover the person you like smokes even though you don't smoke.	.40[c]	−.20[a]	54

[a] $p < .01$.
[b] $p < .001$.
[c] $p <$.___.

the total vignette score were deleted. Results are presented in Table II. Results show that individual vignettes from the Peer Pressure Vignettes Scale were negatively correlated with the Conformity Scale as expected.

One issue concerning the use of hypothetical situations involves the extent to which vignettes reflect actual experiences. To address this issue, participants were also asked to indicate whether they had ever experienced the hypothetical situation described in the vignette. These results are also reported in Table II. The percentage of participants experiencing specific vignettes ranged from 21% (starting a fire) to 80% (skipping classes). Accordingly, results suggest that most of the vignettes were relevant to a large number of individuals.

Correlations among Peer Pressure, Popularity, and Conformity Scales and Vignettes for the Peer Conformity Scale are presented in Table III along with measures of internal consistency, which appear in the diagonal of the correlation table. As anticipated, results show that the Peer Pressure and Popularity Scales were negatively correlated with the Conformity Scale. This suggests that young persons who generally conform to rules will be less influenced by peer pressure. However, because this correlation was only moderate in size ($r = 0.34$), conformity

Table III. Correlations among Peer Pressure, Popularity, Conformity, Peer Conformity Scale

	Conformity Scale	Peer Popularity Scale	Peer Pressure Scale	Peer Conformity Scale
Conformity Subscale	0.81	-0.16^a	-0.34^b	-0.44^b
Popularity Subscale		0.91	0.73^b	0.45^b
Peer Pressure Subscale			0.84	0.54^b
Peer Conformity Scale				0.69

cannot be viewed simply as a protective factor against peer pressure; high levels of conformity are not synonymous with low levels of peer pressure.

Results in Table III also show that Peer Pressure and Popularity Scales were strongly intercorrelated. Despite the different content domain assessed by the Peer Pressure and Popularity Scales, results suggest that items assess a similar construct. Although the correlations between the Peer Pressure and Popularity Scales were high, in all instances item-total correlations with content scale for which the item was written were larger than item-total correlations with content scale for which the item was not written. That is, correlations for Peer Pressure Items were larger with the Peer Pressure Total Score than with the Popularity Total Score. Similarly, correlations for Popularity Items were larger with the Popularity Total Score than with the Peer Pressure Total Score. Finally, estimates of internal consistency were adequate. Cronbach's alpha ranged from 0.69 to 0.91 for all measures.

Univariate Statistics

Univariate statistics for the dependent measures assessed in the study are presented in Table IV for adolescent boys and girls separately. Some anticipated gender differences emerged. Girls scored more favorably on measures of school performance, and lower on measures of alcohol and drug consumption than boys; however, no differences on measures of depressed mood and self-worth emerged. Boys reported a larger number of sexual partners, more favorable attitudes towards sexual activity, and reported skipping more classes than girls. In addition, boys scored higher on antisocial peer conformity vignettes; however, no differences were observed on neutral conformity vignettes or on either of the peer pressure subscales, which was consistent with results reported by Brown *et al.* (1986) using longer measures of peer pressure and peer conformity.

Predicting School Performance, Sexual Attitudes and Behavior, and Substance Use

In addition to evaluating the association among measures of peer pressure and conformity, one of the primary goals of the study was to validate short measures of

Table IV. Univariate Statistics for Male and Female Young Persons

	Female		Male		
	Mean	*SD*	Mean	*SD*	*P*
Popularity scale	45.21	12.29	45.68	14.53	
Peer Pressure scale	29.10	8.56	30.11	9.74	
Neutral items	14.01	4.18	14.53	5.06	
Antisocial items	15.08	5.33	15.78	6.11	
Peer conformity situations	3.31	2.16	4.03	2.72	
Neutral situations	5.91	1.28	5.91	1.38	
Antisocial situations	4.41	1.24	5.12	1.50	.01
Conformity to authority	21.69	5.29	19.19	5.01	.01
Grade	10.78	0.81	11.17	0.73	.01
Well-being measures					
Depressed mood	13.03	9.44	16.51	10.39	
Self-esteem	26.34	2.15	27.09	2.58	
School performance					
English grades	80.05	10.81	67.00	17.86	.001
Math grades	73.77	16.40	57.43	18.30	.001
Skipped classes	7.81	12.52	18.85	22.33	.001
Substance use measures					
Beer consumption	6.65	11.09	21.81	24.53	.001
Alcohol consumption	3.87	4.94	12.11	24.53	.01
Theft under $10	3.87	11.16	9.94	26.53	
Theft over $10	2.60	11.14	3.94	9.51	
Cigarette consumption	23.31	39.46	40.67	55.54	
Number of times drunk	10.02	18.33	23.24	28.56	.02
Soft drugs ever used	3.87	5.16	5.77	5.42	
Soft drugs frequently used (more than 5 times)	0.97	1.11	1.55	1.20	
Hard drugs ever used	3.31	6.46	7.14	10.60	.01
Hard drugs frequently used (more than 5 times)	0.43	0.81	1.34	1.91	.01
Sexual behavior measures					
Number of sexual partners	1.08	1.22	1.92	1.16	.01
Attitudes towards sexual activity	15.63	4.54	18.06	3.86	.01

peer pressure, peer conformity, and popularity constructed for the present study. Accordingly, we also examined how well measures of peer pressure, popularity, and conformity predicted potential psychosocial difficulties, such as poor school performance, sexual attitudes, substance use, and emotional well-being. In particular, we were interested in whether peer pressure, peer conformity, and popularity would predict outcome measures equally well given that they are all conceptually related. Because results presented in Table IV showed that standard deviations for most outcome measures were extremely large and were positively skewed, we used Spearman rank-order correlations to examine the relation between measures of Peer Pressure, Popularity, and Conformity and the various outcome measures.

Results are presented in Table V. First, results showed that correlations between the Popularity Scale and most outcome measures were smaller than

Table V. Correlations among Peer Pressure and Outcome Measures

	Popularity Scale	Peer Pressure Scale	Peer Conformity Vignettes	General Conformity Scales	Beck Depression Inventory
Age	−.14	−.07	−.04	.01	.01
Well-being measures					
Depressed mood	.19[a]	.29[d]	.19[a]	−.29	—
Self-esteem	.02	.02	−.04	−.14	.29[e]
School performance					
English grades	.16	−.31[e]	−.41[e]	.26[c]	−.23[c]
Math grades	.06	.02[e]	−.13[e]	.13	−.16
Skipped classes	.19[a]	.37[e]	.34[e]	.40[e]	.08
Substance Use					
Beer consumption	.18[b]	.36[e]	.51[e]	.32[e]	.15
Alcohol consumption	.13	.28[e]	.32[e]	−.35[e]	.15
Theft under $10	.22[c]	.31[e]	.44[e]	−.37[e]	.21[c]
Theft over $10	.28[d]	.31[e]	.44[e]	−.32[e]	.16
Cigarette consumption	.14	.28[e]	.43[e]	−.15	.15
Number of times drunk	.15	.35[e]	.45[e]	−.27[d]	.18[a]
Soft drugs ever used	.12	.33[e]	.48[e]	−.28[e]	.31[e]
Soft drugs frequently used (more than 5 times)	.25[c]	.39[e]	.50[e]	−.31[e]	.20[c]
Hard drugs ever used	.23[c]	.44[e]	.59[e]	−.37[e]	.25[c]
Hard drugs frequently used (more than 5 times)	.14	.28[e]	.39[e]	−.38[e]	.22[c]
Sexual behavior					
Number of sexual partners	−.12	−.02	.12	−.21[c]	.10
Sexual attitudes	.35[e]	.42[e]	.55[e]	−.35[e]	.20[c]
Number of boyfriends/ girlfriends	.04	.14	.32[e]	−.22[c]	.08

[a] $p < .03$.
[b] $p < .02$.
[c] $p < .01$.
[d] $p < .001$.
[e] $p < .0001$.

correlations between the Peer Pressure and Peer Pressure Vignette Scales and most outcome measures. Second, results showed that the BDI was related to the Peer Pressure Scale and Peer Pressure Vignettes, as well as to the Popularity Scale. Second, most measures assessing school performance, substance use, as well as sexual attitudes and behavior were more strongly correlated with the Peer Pressure Scale and Peer Conformity Scale than with the Popularity Scale. Some significant positive correlations were observed between Popularity and Beer Consumption, Number of Thefts (both above and below $10), Number of Classes Missed, and some measures of Drug Use. However, in all instances, correlation coefficients for the Peer Pressure and Peer Conformity Scales were larger in magnitude than correlations for the Popularity Scale.

We examined differences among the magnitude of correlations between outcome measures and the different measures of peer pressure and conformity in

a repeated measures analysis of variance. Results showed that the mean correlation coefficient that the primary outcome measures (School Performance, Substance Use and Sexual Behavior) had with the Peer Popularity Scale, Peer Pressure Scale, and the Peer Conformity Scale differed significantly, $F(2, 28) = 93.78$, $p < .0001$. Post hoc contrasts showed that the mean correlation between outcome measures and Peer Popularity ($M = 0.16, SD = 0.11$) was significantly smaller than the mean correlation between outcome measures and Peer Pressure ($M = 0.28, SD = 0.14$), which was significantly smaller than the mean correlation between outcome measures and Peer Conformity ($M = 0.40, SD = 0.14$).

These results suggest that measures of peer pressure are better predictors of a variety of outcomes than popularity with peers, despite the strong association between peer pressure and popularity (see Table IV). Young persons scoring high on peer pressure (a) consumed more beer, alcohol, and cigarettes, (b) reported stealing objects (under and above $10) more frequently, (c) were drunk more often in the preceding six months, (d) had poorer English grades and skipped more classes, (e) reported using a greater number of different hard (e.g., cocaine, crack) and soft drugs (e.g., hash, pot, mushrooms) and using them more frequently, and (f) having more favorable attitudes toward sexual activity than young persons scoring low on peer pressure.

Third, results showed that correlations for the Peer Conformity Scale were in most instances larger than correlations for the Peer Pressure Scale. In one instance, the Peer Pressure Scale was not significantly related to an outcome measure, namely Number of Romantic Partners; however, the Peer Conformity Scale was related. Accordingly, results suggest that the Peer Conformity Scale is at least equally effective as, if not better than, the Peer Pressure Scale in predicting a variety potential psychosocial difficulties and risk behaviors, despite using hypothetical situations and a simplified scoring format.

Fourth, a variety of outcome measures were also related to the Conformity Scale as expected. Conformity was related to higher English grades and skipping fewer classes, as well as to lower levels of alcohol, cigarettes, and drugs consumption. Conformity was also related to fewer sexual partners, fewer romantic partners, as well as to less frequently being drunk and having less favorable attitudes toward sexual activity. However, the absolute magnitude of correlations for the Peer Pressure Scale and Peer Pressure Vignettes were greater than the absolute magnitude of correlations for the Conformity Scale.

Finally, results also showed that levels of distress, as assessed by the Beck Depression Inventory, were related to some outcome measures, including theft under $10, number of missed classes, and drug use. However, in all instances, measures of peer pressure were more strongly related to outcome measures than levels of dysphoria. These results indicate that peer pressure and conformity may be better predictors of risk-behavior than emotional difficulties.

Gender Differences

We examined whether the relation between measures of peer pressure and outcome variables differed between adolescent boys and girls by using Fisher's transformation to compare the magnitude of the correlations calculated for boys and girls separately. Few differences emerged. The correlation between Number of Classes Missed and Peer Pressure Vignettes was greater (Fisher's $z = 1.66$, $p < .05$) in young adolescent boys ($r = .63$, $p < .001$) than in young adolescent girls ($r = .25$, $p < .02$). In addition, Math grades were negatively related to Peer Pressure Vignettes in young adolescent boys ($r = -.43$, $p < .04$) but were unrelated to Peer Pressure Vignettes in young adolescent girls ($r = -.05$), and these values were significantly different (Fisher's $z = 2.08$, $p < .03$). Lastly, English grades were negatively related to Popularity in young adolescent boys ($r = -.46$, $p < 0.2$), but were unrelated to Popularity in young adolescents girls ($r = -.07$), and these values were significantly different (Fisher's $z = 1.87$, $p < .04$).

Content Overlap

One final issue addressed in this study concerned the potential content overlap between measures assessing peer pressure and conformity and measures assessing risk behaviors, such as cigarette, alcohol, and drug consumption. Some items on the Peer Pressure and Peer Conformity Scale asked young people explicitly whether they felt pressured by friends to use cigarettes, alcohol, or drugs, whereas other items asked young people whether they felt pressured by friends in general without reference to cigarette, alcohol, or drugs. From the analyses already conducted, it is unclear to what extent Peer Pressure or Peer Conformity items that do not explicitly refer to drug or alcohol use are useful in predicting the actual use of drugs or alcohol. Accordingly, we also examined the relation that antisocial and neutral items had with substance use and theft. This provided us information concerning the degree to which feeling pressured by friends *in general* is an important correlate of cigarette, alcohol, and drug consumption. The first six items assessing Peer Pressure appearing in Table I were aggregated to yield a single score, as were the first five vignettes appearing in the Appendix. None of these items refer explicitly to risk behaviors. Subsequent analyses showed that Neutral Peer Pressure Items as well as Neutral Peer Conformity Items, that made no reference to cigarette, alcohol, drug consumption, were still significantly related to actual cigarette, alcohol, and drug consumption. In fact, subscales based on Neutral Peer Pressure Items and on Neutral Peer Conformity Items remained significantly correlated with all of the outcome measures to which the entire total scales scores for Peer Pressure and Peer Conformity were related. Accordingly, these results show that it is the degree to which individuals feel pressured or urged by friends in general that is important.

DISCUSSION

The purpose of this study was to develop and validate short measures of peer pressure and peer conformity that may be administered quickly and efficiently to adolescent boys and girls and to evaluate the degree to which these different constructs are related to well-being and risk behaviors, such as substance use, delinquency, dating attitudes, sexual behavior, and poor school performance.

Results showed that (a) measures of peer pressure, peer conformity, and popularity constructed for the present study possessed adequate internal consistency, (b) peer pressure, peer conformity, and peer pressure measures were strongly interrelated but distinct from a more general tendency to conform, and (c) peer pressure and peer conformity measures were stronger predictors of risk behavior, such as substance use, delinquency, dating attitudes, sexual behavior, and poor school performance, than was popularity, general conformity, or dysphoria. Results also showed that the relation peer pressure and peer conformity had with risk behaviors and potential psychosocial difficulties did not depend on the content overlap of items making explicit reference to substance use and delinquent behaviors. Peer pressure and peer conformity items that made no reference to any of the substance use or theft measures still correlated strongly with all of the substance use or theft measures. These results are consistent with previous research (Brown *et al.*, 1986), no differences between young adolescent boys and girls were observed on peer pressure assessing antisocial or neutral activities. However, boys scored higher than girls on situations describing antisocial activities, such as substance use, theft, and driving a vehicle while intoxicated, as was found by Brown *et al.* (1986). These findings have a number of implications.

First, despite the large number of studies examining peer pressure, most measures of peer pressure have been developed on older adolescents or young adults. Measures used in this study were designed and validated specifically with younger adolescent boys and girls in grades 11 to 13. Results suggest that peer pressure and peer conformity can be reliably measured in young adolescent boys and girls and that adequate reliability can be obtained with substantially fewer items than contained in existing measures (Brown *et al.*, 1986). Although the peer pressure measure consisted of a substantially smaller number of items and the peer conformity measure used a simplified scoring format, results indicated that measures showed adequate internal consistency and were moderately related to measures of psychosocial difficulties. The peer pressure and peer conformity measures constructed for the present study were related to a variety of risk behaviors and psychosocial difficulties, including substance use, risk-taking behavior, delinquency, dating attitudes, and sexual behavior, which is consistent with what other studies have found (Brown *et al.*, 1986). Correlations between the peer conformity measure and measures of potential psychosocial difficulties were somewhat larger than correlations with the peer pressure measure; however, these differences were not significantly different.

Second, results showed that perceived peer pressure and a need to be popular were strongly interrelated but did not predict risk behaviors and psychosocial difficulties equally well. High scores on the popularity measure were related to a number of behaviors, including theft, sexual attitudes, and the consumption of some substances (experimentation with hard drugs and frequent use of soft drugs), but peer pressure and peer conformity vignettes were more strongly related to risk behaviors and psychosocial difficulties and were related to more risk behaviors and difficulties. This finding supports the view that doing things to be popular with others may be less of a risk factor than the experience of being urged or pressured by peers to act in certain ways.

Third, results also showed that peer pressure and peer conformity were related to more risk factors than were measures of depressed mood. Although a high level of dysphoric mood was related to drug use and some delinquent behavior (theft under $10, number of times drunk), peer pressure and peer conformity vignettes were more strongly related to risk behaviors and were related to more risk behaviors. Considerable research has shown that depressed mood is related to risk factors, such as substance use in both clinical and nonclinical populations. These results suggest that although there may be a small to moderate relation between depressed mood and substance use in school-based adolescent girls and boys, a far stronger effect between substance use, peer pressure, and peer conformity exists.

Limitations

There are a number of concerns with this data. First, all of the information concerning the experiences and behaviors of participants was obtained through self-report. Consequently, the validity of the conclusions drawn from this study need to be considered carefully, particularly those based on self-reports concerning substance use and delinquency. However, some evidence suggests that self-report may be equally, if not more, valid than more objective measures of delinquency, such as court records, especially when behaviors assessed, such as drug use, rarely lead to contact with law enforcement authorities (Gold, 1970; Jensen and Rojek, 1980). Second, results were based on information collected at one point in time. Causal effects of peer pressure on behavior can only be ascertain prospectively. Third, the psychometric properties of the scales still require further validation in an independent, more representative sample.

Conclusions

Findings from this study show the following: (a) that peer pressure and peer conformity can be reliably and efficiently assessed in young adolescents, (b) that doing things in order to be popular with others is strongly related to feeling

pressured by others to engage in certain activities, and (c) that peer pressure is a far stronger predictor of risk behaviors and potential psychosocial difficulties than popularity.

ACKNOWLEDGMENTS

We are grateful for the assistance provided by Robin Patterson in preparation of the manuscript. The current research was supported by a grant from the Lloyd Carr-Harris Foundation.

APPENDIX 1

Peer Pressure Vignettes

1. Imagine that you have been invited to two parties on Saturday night. One party is being held by your current less popular group of friends and the other party is being held by a very popular person at school who you would like to get to know better. What do you really do?
   (a) You go to your friend's party
   (b) You go to the party being held by the more popular person
2. Imagine that you have English and Math classes this afternoon. Your friends have decided to skip classes to go downtown and want you to come. What do you really do?
   (a) You go to your classes
   (b) You skip classes for the afternoon and go downtown with your friends
3. Imagine that you have a major test tomorrow that you must pass. However, your friend who also has the same test tomorrow calls you to say that he/she has one extra free ticket to see a really good band for that night. What do you really do?
   (a) You stay home and study
   (b) You go to the concert
4. Imagine that you are one of the few people in your group of friends who has not had sex yet. At a school dance, you meet somebody who is very popular and attractive and have arranged to go out on a date the following week. Throughout the week, your friends are pressuring you to sleep with this person. When the night arrives, you go out to a movie and later you begin fooling around with him/her. This person asks you if you want to go all the way. What do you really do?
   (a) You have intercourse with this person
   (b) You do not have intercourse with this person

5. Imagine you are at a store with your friends. The place is fairly empty when you notice that your friends are taking things off the shelf without paying for them. You do not want to steal but you are the only person out of your group of friends not taking anything. What do you really do?
   (a) You steal something
   (b) You do not steal something
6. Imagine you are at a party and are having a few beer with your friends. By this time, you and your friends have a good buzz going, but the person who was going to drive your car has already left. You and your friends are left at the party without anybody sober to drive your car. When it is time to go home, your friends urge you to drive. What do you really do?
   (a) You drive home
   (b) You leave your car at the party
7. You have been working very hard to make it on a particular club or team. You are thrilled when you find out that you've made the team. Like many clubs and teams, you have to do something that makes you uncomfortable to become a new member. As part of the initiation, you are told that you have to swallow a goldfish and dye your hair. You've already told your friends you're going to do it. What do you really do?
   (a) You swallow the goldfish and dye your hair
   (b) You do not swallow the fish and dye your hair knowing that you will never really be part of the team
8. Imagine you are eating lunch with a few of your most good looking friends at a restaurant. They have all ordered salads. You'd really like the piece of chocolate cake when you are at this restaurant. What do you really do?
   (a) You order the chocolate cake
   (b) You order the salad
9. Imagine you end up at a party with the popular crowd at school. There is a group of people sitting in the center of the room smoking pot. Everyone is smoking up. What do you really do?
   (a) You also smoke some pot
   (b) You don't smoke pot but risk looking "un-cool"
10. You have an incredible fear of fire. You are on the beach with several friends when you are expected to start a large bonfire. You know that if you show your fear and do not light the fire, your peers will never let you live it down; however, you are terrified of fires. What do you really do?
    (a) You light the bonfire
    (b) You do not light the bonfire
11. You don't smoke, but you just discovered that the guy or girl you like and are hanging out with smokes. He or she is surprised that you don't smoke and urges you to have a cigarette. What do you really do?
    (a) You have a cigarette
    (b) You tell her that you don't smoke

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