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AN ATTRIBUTIONAL STYLE QUESTIONNAIRE FOR GENERAL USE

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Explanatory style is a cognitive personality variable with diverse correlates reflecting good versus bad adaptation. It is usually measured with the Attributional Style Questionnaire (ASQ), but existing versions of this instrument can be difficult for research participants to complete without close supervision. We describe a new version of the ASQ and its use in a mail survey of 146 college students. Results support its efficiency, reliability, and validity. A satisfactory response rate of 70% was attained. Very few items were omitted among the questionnaires returned (1.3%). Subscale reliabilities were satisfactory (alphas > .70), and the new ASQ correlated with reports of depressive symptoms (*r*s > .28), suggesting its appropriateness for general use with adults, including survey research.

Explanatory (or attributional) style is a cognitive personality variable that reflects how individuals explain bad events that befall them (Peterson & Seligman, 1984). Some individuals favor highly general explanations ("I'm a failure as a person"); we identify them as depressive or pessimistic. Other individuals use circumscribed explanations ("it was just one of those things"); we regard them as efficacious or optimistic.

Explanatory style emerged from the attributional reformulation of the learned helplessness model, where it is assigned the role of influencing the nature and extent of helplessness following uncontrollable bad events (Abramson, Seligman, & Teasdale, 1978). Explanatory style has been examined in hundreds of studies in terms of its relationship with diverse measures of good and bad adaptation (Buchanan & Seligman, 1995; Peterson, Maier, & Seligman, 1993). Studies with children, adolescents, and adults show that pessimistic explanatory style is associated with such outcomes as depression, illness, poor academic achievement, and athletic failure (Peterson, 1990; Peterson & Bossio, 1991; Peterson & Seligman, 1984).

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There exists a variety of strategies for measuring explanatory style. Each approach assesses several causal attributions per individual and combines them into an overall index. For example, researchers may ask individuals to provide causal explanations following performance at tasks (e.g., Elig & Frieze, 1979). Answers are categorized by judges according to a scheme such as Weiner's (1985) classification of performance attributions: luck, ability, effort, and task difficulty. These attributions are often interpreted in terms of more abstract dimensions (e.g., "luck" is an external and unstable attribution, whereas "ability" is internal and stable).

Alternatively, researchers may present individuals with events—either actual or hypothetical—and several possible causes. Research participants choose the most likely cause (e.g., Seligman, Peterson, Kaslow, Tanenbaum, Alloy, & Abramson, 1984), rate the different possibilities on Likert-type scales according to their applicability (e.g., Lefcourt, von Baeyer, Ware, & Cox, 1979), or assign a percentage to each option (summing to 100%) reflecting its perceived share of causal impact (e.g., Elig & Frieze, 1979). Again, these scores are often interpreted in terms of abstract dimensions.

Still other researchers may use a content analysis procedure in which causal explanations are identified in "naturally occurring" verbal material such as diaries or interviews. These are then classified into categories and/or rated by judges along attributional dimensions (e.g., Peterson, Schulman, Castellon, & Seligman, 1992). In a variant of this content analysis procedure, Peterson and Ulrey (1994) ascertained explanatory style from Thematic Apperception Test protocols obtained in response to "threatening" pictures.

Probably the most frequently used measure of explanatory style is the Attributional Style Questionnaire (ASQ; Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982). This questionnaire presents individuals with hypothetical events involving themselves (e.g., "you cannot do all the work that is assigned to you"), and in each case asks them to provide in their own words "the one major cause" if the event actually happened. Then they rate this cause using 1 through 7 scales along dimensions that measure the degree to which the cause is internal to the self (versus external), stable across time (versus unstable), and global in effects (versus specific).

The different strategies for measuring explanatory style are not equivalent, and each has its own strengths and weaknesses (see discussions by Elig & Frieze, 1979; Peterson, 1991a; Reivich, 1995; Russell, McCauley, & Tarico, 1987; Tennen & Herzberger, 1986; Weiner, 1986). The Attributional Style Questionnaire seems highly appropriate for testing predictions of the learned helplessness reformulation. This theory emphasizes an individual's style of causal explanation, which means that attributions for diverse events must be obtained (Peterson, 1991b). The ASQ is an efficient way to obtain attributions for multiple events (see Peterson, Villanova, & Raps, 1985). Further, helplessness theory emphasizes the individual's own perception of causes along such attributional dimensions as stability and globality. The ASQ seems phenomenologically closer to this construct than alternative measures that rely on judges to categorize or rate provided attributions (Peterson et al., 1993).

Regardless, the ASQ is not an ideal instrument. Early versions of the ASQ were hampered by poor reliability of the individual dimensions (Tennen & Herzberger, 1986). To increase reliability, researchers often combined these different dimensions, but this strategy is difficult to justify theoretically (Carver, 1989). A better

response to the poor reliability of the original ASQ was the revision of the original measure by Peterson and Villanova (1988), who increased the number of bad events for which attributions are made from 6 to 24. Reliability of the individual dimensions was successfully bolstered.

What also resulted was a measure that can be lengthy, time-consuming (taking up to 30 minutes to complete), and complex. Its use is precluded for many purposes, either because sufficient time is not available or because research participants may refuse to complete the measure or do so only partially. Indeed, even when given adequate time to complete this Expanded ASQ, individuals may omit as many as 15% of the items, particularly those toward the end of the questionnaire (Peterson, 1993).

Despite the large number of investigations using the ASQ, virtually all of these studies have used "captive" samples, such as hospitalized patients or college students from an introductory psychology subject pool. Close supervision is usually required to ensure satisfactory completion of the questionnaire. Because of the theoretical importance of the explanatory style construct, it is imperative that research be able to reach more broadly into the general population.

The present study explores a new version of the ASQ that we hope corrects some of the flaws in the earlier versions and thus allows its wider use. The questionnaire was significantly shortened by deleting 12 of the 24 items of Peterson and Villanova's (1988) Expanded ASQ. Items were deleted because they were relevant only for college students (e.g., "you have trouble with your instructor"), applied only to some segments of the population (e.g., "your Chistmas vacation plans are cancelled"), seemed difficult to imagine (e.g., "you confront a serious conflict in your values"), and/or were phrased in highly abstract language ("your attempt to capture the interest of a specific person of the opposite sex is a failure").

Wherever possible, language was simplified and made more direct. The original and expanded ASQ versions instructed individuals simply to "decide what you feel would be the *major* cause of the situation if it happened to you" and to "answer . . . questions about the cause" (Peterson et al., 1982, p. 290). In contrast, the present measure asked participants to "choose . . . the main cause, that is, what made this situation happen to you" and then to "answer . . . how likely it is that the main cause you gave will continue to affect you . . . [and whether] the main cause you gave [is] something that affects just this situation, or does it affect other areas of your life?"

Descriptions of the provided bad events were similarly changed. Of the 12 items taken from the Expanded ASQ, all but one ("you are fired from your job") were simplified. For example, "you have been looking for a job unsuccessfully for some time" was changed to "you can't find a job." "A friend comes to you with a problem and you don't try to help" was changed to "you don't help a friend who has a problem."

The internality-verus-externality ratings were deleted because studies consistently show these to comprise the least coherent dimensions (Peterson, 1991a). Finally, the anchoring of the rating scales was changed to a metric that clearly implied the bipolar nature of the stability and globality dimensions. In other words, ratings were requested not from 1 through 7, as in previous versions of the ASQ, but instead from −3 to +3 (Schwarz, Knauper, Hippler, Noelle-Neumann, & Clark, 1991).

A mail survey was used as a particularly stringent test of the "friendliness" of this new Attributional Style Questionnaire. Would research participants be willing

to complete and return the questionnaire? Would they omit items? Would the dimensions be as reliable as for previous versions? Would explanatory style as measured by this new questionnaire correlate with reports of depressive symptoms, as studies of earlier versions of the ASQ typically have found (Sweeney, Anderson, & Bailey, 1986)?

METHOD

Participants

Research participants were obtained by a systematic random sampling of undergraduates from the 1992–1993 University of Michigan Student Directory. One hundred fifty undergraduates with local addresses were selected. Of these 150 individuals, 4 were no longer enrolled by the time they received the initial survey or had incorrect addresses, resulting in a sample of 146 individuals. Of these potential research participants, 102 returned questionnaires (53 males, 49 females), an overall return rate of 70%. The majority of the participants were White (77%), and their average age was 22.4 years (SD = 13.5). They were distributed evenly across class level (25% freshman, 24% sophomores, 24% juniors, and 27% seniors). In the present sample, gender, ethnicity, age, and class level did not correlate with explanatory style.

Instruments

Two questionnaires were mailed. The first was our new Attributional Style Questionnaire. The following instructions, simplified from Peterson et al. (1982), were provided:

WHAT CAUSES THINGS TO HAPPEN TO YOU?

> Please try to imagine yourself in the following situations. If such a situation happened to you, what do you think might have caused it? While situations like these may have many causes, we want you to choose only one—THE MAIN CAUSE, THAT IS, WHAT MADE THIS SITUATION HAPPEN TO YOU.
>
> Please write the main cause in the box after each situation. Next, answer two questions about the cause you provided. First, how likely is it that the main cause you gave will continue to affect you? Second, is the main cause that you gave something that affects just this situation, or does it affect other areas of your life?
>
> To summarize, please:
>
> 1. Read each situation and vividly imagine it happening to you.
> 2. Decide what you feel would be the one main cause for the situation if it happened to you.
> 3. Write down the one main cause in the box provided.
> 4. Answer the two questions about the main cause.

Twelve different bad events were provided, printed two per page. All 12 events were taken from the Expanded ASQ, with simplification as already discussed; 4 of these events had in turn been taken from the original ASQ (see Table 1).

To ascertain the perceived stability-versus-instability of the attributed causes, participants were asked "How likely is it that the cause you gave will continue to affect you?" Ratings were made on 7-point scales, from −3 ("will never affect you")

Table 1
Events Used in New ASQ

Try to imagine yourself in the following situation . . .
1. . . . you have trouble sleeping.
2. . . . you feel sick and tired most of the time.
3. . . . you have a serious injury.
4. . . . you can't find a job.*
5. . . . you can't get the work done that others expect of you.*
6. . . . you are fired from your job.
7. . . . you don't help a friend who has a problem.*
8. . . . you have financial problems.
9. . . . you don't understand what your boss wants you to do.
10. . . . a friend is very angry with you.*
11. . . . you are guilty of breaking the law.
12. . . . you have a serious argument with someone in your family.

*Similar event included in the original ASQ (Peterson et al., 1982).

through + 3 ("will always affect you"). Similarly, to ascertain the perceived globality-versus-specificity of the attributed causes, participants were asked "Is the cause you gave something that just affects [this situation], or does it affect other areas of your life?" Ratings were made on 7-point scales, from − 3 ("just affects [this sort of event]") through + 3 ("affects all other areas"). For both dimensions, scores were averaged across the pertinent ratings.

The second questionnaire was the Beck Depression Inventory (BDI; Beck, 1967), a frequently used measure of the severity of depressive symptoms. There are 21 items reflecting the cognitive, behavioral, emotional, and somatic symptoms common to depression. On 0 to 3 scales, participants indicate the extent to which each symptom has been present during the past week. Scores are summed.

Participants also answered questions about their age, gender, ethnicity, and year in college.

Procedure

Dillman's (1978) Total Design Method for mail survey research was employed. All potential participants were mailed copies of the questionnaires along with a cover letter requesting participation and a $1 incentive. A stamped reply envelope addressed to the researchers was included as well. Reminder postcards were sent to everyone 1 week later. Another set of materials (without the $1 incentive) was sent to nonresponders 1 month later. A third set of materials (without the $1 incentive) was sent to nonresponders another month later.[1] Seventy-five individuals responsed to the first mailing, 26 to the second mailing, and 1 to the third mailing.

RESULTS

Table 2 presents the means, standard deviations, reliabilities, and intercorrelations of the BDI and the ASQ dimensions. (To facilitate comparison with previous

[1]Dillman (1978) recommended that the final contact with nonresponders be made via certified mail. We did not follow this recommendation, instead using first-class mail.

studies, the ASQ dimensions were transformed to 1–7 scales.) Both attributional dimensions had satisfactory reliabilities. Item analyses for the ASQ showed that all item-total correlations were positive (stability: range from .27 to .59, median = .46; globality: range from .08 to .48, median = .36). Furthermore, deleting any particular item lowered the reliability of the associated dimension. Stability and globality were substantially intercorrelated, as previous research has found (Peterson, 1991a). Both attributional dimensions correlated significantly with BDI scores, also as previous research has found (Sweeney et al., 1986).

Table 2
Intercorrelations of Depressive Symptoms and Attributional Dimensions (N = 102)

Variable	1	2	3
1. BDI	(.87)		
2. ASQ stability	.28*	(.81)	
3. ASQ globality	.31*	.63*	(.74)
M	8.29	4.76	4.63
SD	8.18	.94	.93

Note.—Figures in parentheses are reliabilities estimated by Cronbach's (1951) coefficient alpha.
*$p < .005$.

Of the 2,448 possible responses to the ASQ (12 events × 2 ratings × 102 research participants), only 33 were omitted (1.3%), a substantially lower figure than we have found when using previous versions of the ASQ.[2] Eighty-nine individuals (87%) completed all the ASQ ratings. In other words, the 33 omitted responses were by the same 13 participants (11%). Twenty-two of these 33 omissions were for the last three events, suggesting a "breakoff" effect.

DISCUSSION

The present results show that the new ASQ is a satisfactory instrument, with evidence for efficiency, reliability, and validity. The response rate of 70% is good for a mail survey of college students (cf. Burnett, 1978; Woodward & McKelvie, 1985). According to Dillman (1978), the Total Design Method usually results in a response rate of at least 60%, with improvements due to brevity and "friendliness" of the measures, perseverance of the researchers, particular characteristics of the sample, and so on. In the present research, we cannot say with certainty that the new ASQ was responsible for the good response rate because we did not conduct similar surveys using previous versions of the ASQ. Still, we lean toward this interpretation. If nothing else, we conclude that the new ASQ can be completed without direct supervision.

[2]This information is rarely reported. For a context, however, consider that in two samples of college students who completed a previous version of the ASQ at the same time the present study was conducted, 5.0% of all ASQ items were omitted in one, and 14.5% in the other (Peterson, 1993).

Very few items were omitted among the questionnaires returned. Reliabilities[3] of the stability and globality dimensions exceeded those reported for the original ASQ (e.g., alphas = .46 and .59, respectively; Peterson et al., 1982) and approached those reported for the longer Expanded ASQ (e.g., alphas = .85 and .88, respectively; Peterson & Villanova, 1988). We did not ascertain the test-retest reliability of our new ASQ, although studies with previous ASQ measures show that the attributional dimensions are relatively stable over at least several months (average *r*s > .60; Peterson et al., 1982; Seligman et al., 1984; see also Burns & Seligman, 1989). Explanatory style measured with the new ASQ was independent of gender and ethnicity, as studies with earlier versions of the ASQ have shown (Peterson et al., 1993). Explanatory style measured with the new ASQ correlated with reports of depressive symptoms as measured by the BDI to the same extent as explanatory style measured with previous versions of the ASQ (average *r*s = .30; Peterson & Seligman, 1984; Sweeney et al., 1986; Tennen & Herzberger, 1986).

The mean scores for stability and globality obtained here (4.76 and 4.63, respectively) were somewhat higher than those usually reported for college student samples responding to the original ASQ (e.g., 4.14 and 3.87, respectively; Peterson et al., 1982) or the Expanded ASQ (e.g., 4.31 and 4.04, respectively; Peterson & Villanova, 1988). The exact interpretation of these differences is not clear. One possibility is that the present sample included a greater proportion of depressed (pessimistic) individuals than did previous college student studies, which were limited to individuals willing and able to show up for scheduled research appointments. The average BDI score in the present sample (8.29) supports this interpretation, because it is higher than that typically reported for captive college student samples (e.g., Peterson & Seligman, 1984). However, there were no associations between explanatory style or BDI scores and whether the questionnaires were returned in response to the first, second, or third mailing. Another possibility is that the −3 to +3 rating scale we employed had the effect of shifting mean scores upward in comparison to the 1 to 7 scales used in previous versions of the ASQ. In any case, the standard deviations of the present scales were essentially the same as those previously reported.

The most controversial aspect of the new ASQ described here is that it did not ask individuals to rate their provided causes along the dimension of internality-versus-externality. Previous studies have found that these ratings are less reliable than those of the stability and globality dimensions, perhaps because "internality" is a heterogeneous construct (Peterson, 1991a). Furthermore, Abramson, Metalsky, and Alloy (1989) have argued that stability and globality have more direct effects on helplessness outcomes than does internality, further justifying its deletion in our new ASQ. Nonetheless, investigators specifically interested in the internality-versus-externality of attributed causes can readily add this rating to the new ASQ. The questionnaire can also be modified to include other attributional dimensions of theoretical interest, such as the perceived controllability of causes and/or events (Peterson, 1991a).

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[3]Reliability estimates for previous versions of the ASQ are probably more distorted than those obtained in the present study because alpha coefficients are calculated only from data provided by individuals who omit no items (Cronbach, 1951).

Previous versions of the ASQ have been widely used to measure explanatory style and investigate its correlates, despite difficulties that have limited ASQ use to "captive" samples able to be explicitly instructed and supervised while responding to questions. We conclude that the new ASQ described here will allow more flexible investigations of explanatory style, including studies that survey the general population. Because the original ASQ has been used with research participants as young as 12 years of age (e.g., Peterson, 1990), we are confident that the new measure can be used with adolescent samples as well. Whether the instrument is suitable for children is a question that can be answered only with appropriate data.[4]

Explanatory style has never been investigated in general samples, and the availability of this new ASQ makes it possible to see if the links established in special samples between pessimistic explanatory style and such outcomes as depression, illness, and poor achievement hold more broadly. Such studies can also investigate, presumably in more valid ways, existing questions in the explanatory-style literature (Peterson et al., 1993). For example, what is the relationship between explanatory style for hypothetical events versus actual events? How do different strategies for measuring explanatory style compare and contrast? Does explanatory style interact with stressful occurrences to predispose negative outcomes? Do other cognitive variables—such as rumination—mediate the effects of explanatory style?

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[4]Children younger than 8 years of age do not offer attributions that "behave" like those made by older individuals (Nolen-Hoeksema, 1986), presumably because their sense of causality has yet to develop (see discussion by Peterson & Bossio, 1991). So, there is an absolute lower age level for the use of any measure of explanatory style, at least as we conceive the construct.

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