September 2019

Perception of Cause and Solution for Personal Problems by a Hearing-Impaired Student Population: The Significance of Situation-Defined Attributions for Control

Steve Wolk
Gallaudet College, Washington, D.C.

Robert Beach
Gallaudet College, Washington, D.C.

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION: THE SIGNIFICANCE OF SITUATION-DEFINED ATTRIBUTIONS FOR CONTROL

Steve Wolk
and
Roger Beach
Gallaudet College
Washington, D.C.

The present paper is concerned with the basic issue of how hearing-impaired students view the causes and solutions for specific personal and academic problems. Lefourt (1982) has shown that an individual's perception of control has much to do with the ways in which that person will ultimately encounter life's stresses and manage adversities.

The current authors have assumed the point of view of Rotter (1975) that generalized assessments of locus of control attributions may be of minimal value for the prediction and understanding of behavior in most well-defined situations. The situational specificity found in most interpersonal settings would tend to reduce the meaningfulness of asking very generalized, casual attribution questions. The point is that the most meaningful attributional analysis may often require a situationally-specific assessment of attributional beliefs.

The present investigation is concerned with the pattern of specific attributions for the cause and solution of personal problems, ranging from academic to personal finance issues, among a deaf college population, as well as the academic and counseling implications of such attributions. An issue that has surfaced in the literature concerning the education and counseling of hearing-impaired students concerns the possible high degree of externality in causal perception that may characterize this population. Quigley and Kretschmer (1982) have argued that, to the extent that many deaf children are overprotected and controlled by parents and teachers, these children might not take responsibility for their own behavior. Such a socialization experience might lead later in life to a perception that most situations are governed by external control.

A few empirical studies have, in fact, considered the general locus of control beliefs among deaf samples (Bodner & Johns, 1977; Koelle &

Convey, 1982; Dowaliby, Burke & McKee, 1983). This literature has shown that, generally, deaf individuals possess very similar generalized locus of control beliefs to hearing groups, beliefs that can best be described as moderate on the average and not inordinately external. However, this literature really hasn't offered a more specific analysis of situational dimensions that may moderate attributional beliefs within a special population of hearing-impaired young adults. Particularly, it might be expected that, compared to older adults, deaf adolescents and young adults who are in the process of developing personal and interpersonal competencies and attitudes across many domains of life activity, would be more likely to distinguish causal attributions for personal problem situations.

In conclusion, three major questions were posed in the present study:

(1) Do deaf young adults generally reflect a significant tendency for externality in their attributions for the cause of and responsibility for solution of personal problems as the general literature on the socialization experience of deaf children suggests?

(2) Are deaf young adults' causal attributions across an array of personal problems significantly influenced by the nature of the situation for which the attributions are made?

(3) Do deaf students distinguish between internal and external attributions made for the *cause* of a personal problem as opposed to the responsibility for *solution* of the problem?

METHOD
Sample

An available population of 360 deaf undergraduate students attending Gallaudet College, a postsecondary educational institution serving deaf students, was administered the research instrument on the first evening of a new student

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS
BY A HEARING-IMPAIRED STUDENT POPULATION

orientation program. Three hundred nineteen students or 87% of the population completed the entire data collection instrument.

Of the 319 students, 212 (66%) were females and 107 (34%) were males. The mean age of the students was 19.1 years, with approximately 90% falling between 17 and 20 years of age.

All subjects were first-year preparatory or freshman students who voluntarily participated in the study.

Instrument

The data collection instrument consisted of a description of eight hypothetical problem situations or vignettes and a series of questions related to each of the problems.

The eight vignettes had been identified as highly salient for the population through a pilot study involving 20 students and 10 staff members who responded to a reformatting of the Mooney Problem Check List (1942). The eight problems along with their titles and abbreviations are as follows: Adjustment to College Work (ACW); Personal-Psychological Relations (PPR); Social-Psychological Relations (SPR); Finances, Living Conditions, and Employment (FLE); Courtship, Sex, and Marriage (CSM); The Future, Vocational and Educational (FVE); Home and Family (HF); and Curriculum and Teaching Procedure (CTP). The following paragraphs illustrate four of the eight vignettes:

Adjustment to College Work

Jack has very bad study habits. He always waits until the last minute to do his homework assignments. He usually has to ask another student to tell him what the homework assignment was because he forgot to write it down. When he does his assignment he puts it somewhere in his textbook and sometimes loses it. When he has to study for a test, he can never decide what is important to study.

Social-Psychological Relations

Jake's friends drink and smoke pot. Jake drinks and smokes pot too because he wants his friends to continue to like him. Jake wants to stop because he doesn't think that drinking and smoking pot are good for him. He has not stopped because he doesn't want to become unpopular with his friends. He is frustrated because he always behaves like his friends.

Home and Family

Joseph feels that his parents are always criticizing him. Joseph's parents seem to expect too much from him. Joseph would like his parents to demand less from him and to show more love and affection.

Curriculum and Teaching Procedures

James graduated from high school last year and decided to go to Gallaudet College. He picked his major before he came to college but can't take courses in his major. He must take general education courses first. He is frustrated and still wants to take courses in his major.

For each of the eight descriptions students responded to a multiple-choice comprehension question, responses that served as a check that subjects understood the basic theme of each problem description. The main questions for each vignette required that subjects attribute the responsibility for the *cause* of the problem on both an internal and external dimension using two five-point, Likert-type scales:

> Why is the student having this problem? Read each statement and show how much you agree or disagree with it.

1. *She caused the problem to happen to herself.*

Strongly
Agree   Agree   Undecided
a. _____ b. _____ c. _____
Strongly
Disagree   Disagree
d. _____ e. _____
(Internal Cause Attribution)

2. *Something or someone else caused the problem for the student.*

Strongly
Agree   Agree   Undecided
a. _____ b. _____ c. _____
Strongly
Disagree   Disagree
d. _____ e. _____
(External Cause Attribution)

With the same Likert scale students also made attributions for solution:

> What do you think must change to solve this problem? Read each statement and decide how much you agree or disagree

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION

with it.

1. *She must change her own behavior to avoid the same problem in the future.*
(Internal Cause Attribution)

2. *Someone or something else must change (not the student) to avoid the problem in the future.*
(External Cause Attribution)

Procedure

Prior to the administration of the instrument, 36 faculty advisors and 18 peer advisors were provided a two-hour training session on the administration procedures of the instrument. Subjects were administered the instrument in small groups of 8 to 14 students each. Each member of the group completed his individual instrument following the directions of a co-led team comprised of his academic advisor and his peer advisor.

Results

Log-linear analytical techniques, appropriate for the analysis of multiple categorical variables, represented the primary statistical procedure applied to the data. Any potential relationships that might exist among variables can be assessed by examining the patterning of the frequency data representing the categorical variables. Basically, one is analyzing whether the frequencies of one variable's categories distribute themselves differentially across the various categories of one or more of the remaining variables or dimensions comprising the full multidimensional frequency table.

The major findings of the analyses, conducted separately for the cause and solution attributional responses, indicated that the type of problem to which the students responded, as well as the sex of the student, influenced the levels of both internal and external attributions. It should be noted at the outset that, generally, the students in the present sample tended to make stronger internal, relative to external attributions. The original five-point rating scale was collapsed into a three-level attributional scale ("high", "medium", and "low"). For cause attributions 56.8% of the sample made a *high* internal attribution across all problem areas; 45.2% made a *low* external attribution. For solution attributions the corresponding percentages were: 67.8% for high internality and 40.6% for low externality. Thus, both main effects for internality and externality were significant ($p < .001$), reflecting that the deaf subjects of the present study were more likely to make a high internal attribution (relative to medium or low) and a relatively lower external attribution across all eight problem descriptions.

Table 1 represents the relative frequency data corresponding to the effects associated with the cause attributions. Also presented, for purposes of contrasting and clarifying the influences of problem type and sex, are the overall

TABLE 1
Relative Percentages for Levels of Internal and External Cause Attributions Across Problems (Main Effect) and By Problem and Sex of Student (Interaction Effect)

	Internal Attribution			External Attribution		
	% High	% Medium	% Low	% High	% Medium	% Low
Main Effect	56.8	18.4	24.8	34.0	20.8	45.2
Interaction with Problem						
ACW	89.7+	5.6−	4.5−	11.6−	11.0−	77.4+
PPR	64.6+	22.3	13.1−	20.0	29.5	50.5+
SPR	73.4+	11.3−	15.3−	47.3+	18.2−	34.5−
FLE	35.1−	26.0	38.9+	37.6	23.2	39.2
CSM	66.5+	18.8	14.7−	29.8	20.4	49.8+
FVE	47.3	28.5	24.2	24.8	25.1	50.2+
HF	16.6−	16.3	67.1+	74.6+	13.2	12.2−
CTP	61.1+	18.5	20.4−	26.0	25.7	48.3
Interaction with Sex						
Male	52.7−	21.4+	25.9	34.6	24.1+	41.3−
Female	58.8+	16.9−	24.3	33.7	19.1−	47.2+

Note: +, significant ($p < .01$) positive deviation from the main effect
−, significant ($p < .01$) negative deviation from the main effect

Vol. 20 No. 2 October 1986

19

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION

averages or main effects for both internal and external control attributions, averages derived across all subjects and types of problems. These averages can be contrasted with the pattern of internal and external attributions developed for each problem and Table 1 also indicates when individual problem attributions signficantly diverge positively or negatively from the corresponding average. What is most obvious from Table 1 is that several of the problems produced significantly more internal attributions for cause than other problems and the average generally. Thus, the problems of adjustment to

college work, social-psychological relations, courtship, sex, and marriage, personal-psychological relations, and curriculum and teaching procedure produced a stronger tendency to attribute the cause of such problems to self factors. On the other hand, the problem of home and family elicited a much stronger external attribution for cause than any of the other problems or the average generally.

A similar overall pattern of attributes was found for solution across the eight problems and Table 2 presents these data. Noteworthy is the fact that four of the five previously

TABLE 2
Relative Percentages for Levels of Internal and External Solution Attributions Across Problems (Main Effect) and By Problem and Sex of Student (Interaction Effect)

	Internal Attribution			External Attribution		
	% High	% Medium	% Low	% High	% Medium	% Low
Main Effect	67.8	13.6	18.6	38.4	21.0	40.6
Interaction with Problem						
ACW	93.7 +	3.8 −	2.5 −	25.4	10.3 −	64.3 +
PPR	85.9 +	9.1	5.0 −	31.0 −	21.3	47.7 +
SPR	87.1 +	5.6 −	7.3 −	41.7 +	22.3	36.0
FLE	45.1 −	19.7 +	35.2 +	47.9 +	22.3	29.8 −
CSM	75.6 +	12.2	12.2	33.5	23.8	42.7 +
FVE	61.1	24.1 +	14.8	26.3 −	28.8 +	44.9
HF	26.0 −	19.4 +	54.6 +	74.3 +	13.5 −	12.2 −
CTP	67.4	14.7	17.9	26.0 −	25.7	47.7 +
Interaction with Sex						
Male	64.4 −	16.5 +	19.1	38.3	23.9 +	37.8 −
Female	69.5 +	12.1 −	18.4	38.4	19.5 −	42.1 +

Note: +, significant (p < .01) positive deviation from the main effect
      −, significant (p < .01) negative deviation from the main effect

discussed problem areas (ACW, PPR, SPR, and CSM) again elicited a comparatively stronger internal attribution than the other problems or the average, generally. Also, comparable to the findings for cause, the problem description concerning home and family issues (HF) led to the strongest level of external attribution.

One last finding concerns the pattern of internal and external attributions for cause and solution when compared between males and females. Tables 1 and 2 display the overall tendencies of males and females, across the eight problems, to make internal vs. external attributions. These data reflect that females were somewhat more likely to make a

stronger internal attribution than males for both cause (p < .001) and solution (p < .001) and a weaker external attribution for cause (p < .001) and solution (p < .01) when attributions were averaged across problems.

Discussion

The results of the present descriptive study support several conclusions concerning the attributions of a postsecondary population of hearing-impaired young adults. First, and perhaps of most fundamental importance to an understanding of the attributional process, it was clear that attributions for cause and solution of typical problems, differentiated as internal and external control,

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION

varied extensively as a function of the type of problem considered by students. For example, problems concerning *adjustment to college work* and *social-psychological relations* elicited the strongest internal causal attribution; when a possible solution was considered, these problems, along with that of *personal-psychological relations*, produced the strongest levels of internality. On the other hand the problem description concerning *home and family* produced a similarly high level of externality for both cause and solution attributions. Overall, these basic patterns to the attributions strongly suggest that deaf college students make systematic differentiations among attributions along situational dimensions. Thus, an understanding of how such individuals perceive and cope with life's problems may be most enhanced through a situationally specific rather than a generalized assessment of control and responsibility for cause and solution of problems. In this sense a generalized assessment of locus of control that produces one global index of expectancy for control (Lefourt, 1982) may only represent, at best, a "central tendency" that has minimal value for analyzing and understanding the responses to any specific problem situation. There was a very significant amount of variation in both the cause and solution attributions across problem areas. For example, 89.7% and 93.7% of the sample used a *high internality* attribution for adjustment to college work for cause and solution respectively, compared to 74.6% and 74.3% who used a *high externality* attribution for cause and solution of the problem concerning home and family.

Secondly, and of relevance to the issue of whether deaf students are socialized toward externality, it is noteworthy that the sample, overall, was more disposed toward internality than externality for both cause and solution attributions. To some degree, the methodology employed, i.e., a "role-played," low ego-threatening exposure to problems, may have decreased the level of direct threat that has been found to elicit a defensive externalizing of causal factors (Lefourt, 1982). This tendency to avoid an externality bias in attributions is consistent with the general findings of a previous study of this population (Wolk, 1985) in which deaf students did not use externality to explain away academic failure more than academic success. Some early literature has suggested that deaf

young adults, due to a dependency-oriented socialization experience in childhood, may lack a strong belief in personal autonomy and control for interpersonal situations (Quigley & Kretschmer, 1982). The present study's findings are not supportive of this contention. Additionally, the Compensatory Model of helping and coping, upon which counseling approaches have been developed (Roessler & Bolton, 1978), suggests that handicapped individuals may not see themselves, or be seen by others, as responsible for the causes of problems, but are perceived as responsible for solutions. Again, within the limitations of the present study's methodology, the findings are not consistent with the expected externality in causal beliefs suggested by the Compensatory Model. This may also suggest that deaf young adults, particularly in an educational milieu in which the possible negative effects of students' deafness are ameliorated, do not perceive their deafness as handicapping and thus do not react in a compensatory fashion when cause or solution of problems is considered.

While the focus of the present investigation was on the attribution process, attributions were assessed for the cause of and solution for personal problems. Thus, the implications of the results may have some significant relevance for the provision of counseling services to special populations of young adults. Specifically, attributions related to the cause of a problem as well as attributions regarding the responsibility for the solution of a problem will have a significant bearing on the problem-solving strategies an individual elects to invoke. Proceeding on the major findings of this study, the following possible implications are offered:

a) Attributions of the nature examined in this study aid in defining helping interventions by answering two basic questions: 1) who is to blame for the problem; and, 2) who is responsible for the solution of the problem (Karuza, Zevon, Rubinowitz, and Brickman, 1982);

b) Differentiations among attributions among situational dimensions suggest that clients may demonstrate varying problem solving strategies that are contingent upon these attributions. Thus, if individuals were presented with a comprehensive listing of problem situations, and attributional responses were obtained, these responses

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION

could provide direction for either preventive and/or intervention programs. Such information could guide the allocation of personnel and resources for the counseling process;

c) Findings related to the overall tendency for the sample to be more disposed toward internality than externality raise questions regarding the accuracy of depicting handicapped populations in regard to the Compensatory Model. Critical to any helping relationship is the agreement between client and counselor regarding assessment of the client's problem, with research indicating that agreement is shown to be positively related to client-perceived beneficial outcomes of counseling (Sherrard & Batson, 1979). In other words, if the client and counselor attribute the cause of the client's problem to the same source, clients perceive the helping relationship to be significantly more beneficial (Hurst, Weigel, Thatcher & Nyman, 1969);

d) Client attributions regarding solution of problematic situations may also influence the counseling approach used by a particular counselor. Problem solutions which are attributed to internal factors, where the client is sensing his or her responsibility for resolving the problem, may be facilitated or enhanced with counseling approachers such as Behavior Therapy, Rational-Emotive Therapy, or Reality Therapy. Each of these approaches recognize the responsibility of the client and counselor to take an active and directive role in resolving the problem. Rational-Emotive Therapy and Reality Therapy both place the therapist in a position of teaching and directing a client to assume responsibility for the solution of his or her problems. On the other hand, clients who attribute the cause and solution of problems to an external source may be more comfortable with either a client-centered or Gestalt Therapy approach as they seek clarification of conflicting feelings.

In summary, the attributional patterns of the deaf students of the present sample suggest several important conclusions. The perception of personal (internal) control or responsibility for both the cause and solution of highly important problem areas is relatively stronger than the attributions made to external factors. Thus, teachers and counselors of such students could assume that an adaptive orientation exists among students such as those in the present sample: a willingness to percieve potential problems to be caused by personal factors and a readiness to seek solutions in personal action. The argument heretofore presented in the general literature, that deaf children and young adults are predisposed toward externality, an orientation that represents placing blame for problems on others and environmental factors, is not supported by the present study's findings. Further research should be conducted to determine the degree to which other handicapped or special student college populations rely upon internal or external explanations for the causes and solutions of important academic and personal problems.

The attributional patterns analyzed in the present investigation do support the conclusion that the type of problem described significantly influences the perceptions young deaf adults hold for the cause and solution of such problems. As noted earlier, a generalized assessment of expectancy for control can be of minimal value in predicting and explaining students' perceptions and reactions to life problems and crises. The present assessment strategy, in which the attributions to both internal and external control were measured separately for a set of problem descriptions, offers more insight into the attributional processes of a population of young adults who may still be developing and clarifying perceptions of potential causes and solutions for representative and important problems.

Finally, the attributional beliefs of the present group of deaf students suggest that perceptions concerning the solutions of problems may be more complex than perceived causes. Specifically, for most of the problem descriptions, it was more likely that students saw both internal and external factors as potential sources of solution relative to the cause of the problem. Attributions have been studied and analyzed primarily as retrospective analyses of the causes of immediate past outcomes or events (Antaki & Brewin, 1982); the present study would suggest that a type of attribution may also be derived for perceived or expected responsibility for solutions to problem outcomes. Additionally,

PERCEPTION OF CAUSE AND SOLUTION FOR PERSONAL PROBLEMS BY A HEARING-IMPAIRED STUDENT POPULATION

solution attributions may offer more insight into why a student may choose to become active or to remain passive when problems are encountered. The belief that a possible solution is under personal (internal) control would predict a more active response by a student relative to a belief in external control. On the other hand, a solution believed to be found both in internal and external factors may lead to the type of ambivalent response likely to be made in a complex situation. Clearly, the assessment of specific cause and solution attributes within both special and regular student populations should remain a focus of research attention.

REFERENCES

Bodner, B. A. & Johns, J. (1977). Personality and Hearing Impairment: A Study in Locus of Control. *The Volta Review, 79*, 362-372.

Dowaliby, F. J., Burke, N. E., & McKee, B. G. (1983). A Comparison of Hearing-impaired and Normally Hearing Students on Locus of Control, People Orientation, and Study Habits and Attitudes. *American Annals of the Deaf, 128*, 53-58.

Hurst, J. C., Weigel, R. G., Thatcher, R. & Nyman, A. J. (1969). Counselor-client Diagnostic Agreement and Perceived Outcomes of Counseling. *Journal of Counseling Psychology, 16*, 421-426.

Karuza, J., Jr., Zevon, M. A., Rabinowitz, V. C., & Brickman, P. (1982). Attribution of Responsibility by Helpers and Recipients. In T. A. Wills (Ed.), *Basic Processes in Helping Relationships* (pp. 107-130). New York: Academic Press.

Koelle, W. H. & Convey, J. J. (1982). The Prediction of the Achievement of Deaf Adolescents From Self-concept and Locus of Control Measures. *American Annals of the Deaf, 127*, 769-778.

Lefourt, H. M. (1982). *Locus of Control. Current Trends in Theory and Research.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Mooney, R. L. (1942). Surveying High Schools Students' Problems By Means of a Problem Checklist. *Educational Research Bulletin, 21*(3), 57-69.

Quigley, S. & Kretschmer, R. (1982). *The Education of Deaf Children: Issues, Theory, and Practice.* Baltimore, MD: University Park Press.

Roessler, R. & Bolton, B. (1978). *Psychological Adjustment To Disability.* Baltimore, MD: University Park Press.

Rotter, J. B. (1975). Some Problems and Misconceptions Related to the Construct of Internal vs. External Control of Reinforcement. *Journal of Consulting and Clinical Psychology, 48*, 56-67.

Sherrard, P. A. D. & Batson, C. D. (1979). Client and Counselor Perception of the Client's Problem: An Analysis of Initial Assessment Based on Attribution Theory. *Journal of College Student Personnel*, 14-23.

Wolk, S. (1985). The Attributional Beliefs of Hearing-impaired Students Concerning Academic Success and Failure. *American Annals of the Deaf, 130*, 32-38.