

## Dogmatism and Interviewing Skills of Student-Physicians

Glenn A. Saltzman, Mark L. Savickas, Martha L. Walker,  
and Fredric M. Wolf

### Summary

The relationship of open and closed minded thinking with nine indexes of interviewing skills for a sample of 55 first-year medical students was explored. Pearson Product correlations indicated no significant relations between dogmatism and small group performance nor between dogmatism and Standard Indexes of Communication and Discrimination administered both before and after a 10-week training period. However, more closed minded student physicians performed significantly better on a videotaped screened patient interview evaluated by both a medical school supervisor and an outside expert rater, as well as on an objective and short answer final examination. While all students on the average improved significantly from pre- to post-testing on the Communication and Discrimination indexes as a result of training, partial correlation analyses of the difference scores indicated neither more open nor closed minded students exhibited an advantage in gain. Several explanations and implications of the findings are offered.

### Introduction

The medical profession is becoming increasingly aware of the impact of positive physician-patient rapport and communication in facilitating patients' satisfaction with medical care, compliance with treatment regimens, and improved treatment outcomes (DiMatteo, 1979). The modern specialization and technological advances in medicine have all but made the traditional family doctor obsolete (Daly & Hulka, 1975). Many patients feel that their physicians communicate with them in language beyond their grasp and understanding, and are often intimidated by the manner in which physicians ask their questions (Shuy, 1976). Medical schools have recognized the importance of developing interpersonal skills, and at least 68 percent of American medical schools currently offer courses in interviewing skills education. Approximately 80 percent of these programs are less than five years old (Kahn, Cohen, & Jason, 1979).

Research indicates that persons who are more open minded and exhibit less ethnic prejudice and authoritarianism in their beliefs, as compared with their peers, are likely to be less rigid in their problem-solving behavior, less concrete in their thinking, have a broader grasp of a particular subject, seek and

utilize more information and resist premature closure in their perceptual processes, reserve judgment in decision-making, exhibit fewer distortions of memory, and exhibit greater tolerance of ambiguity (Goldman & Blackman, 1978; Kemp, 1960; Rokeach, 1960). In a series of studies, Kemp (1961, 1962, 1963) has provided evidence that more open-minded college and graduate students have fewer personal problems and are more likely to profit from counseling.

These are all desirable characteristics for individuals engaged in the helping professions, and it would seem likely that more open minded student-physicians, in contrast to their more closed minded cohorts, would exhibit superior interpersonal and communication skills. Moreover, just as Kemp (1961) reported that more open minded individuals profit more from counseling, it might be anticipated that more open minded medical students would similarly profit more from communication skills training emphasizing the development of patient trust, reciprocal physician-patient relationships, and physician attending and responding skills.

## Method

### Subjects

Participants in the study were 75 first-year medical students at the Northeastern Ohio Universities College of Medicine emphasizing family practice. As participation was voluntary, data was obtained for 55 of these students (38 males and 17 females).

### Measures

The Dogmatism Scale - Form E developed by Rokeach (1960) was used to measure individual differences in openness or closedness of belief systems. This scale contains 40 seven-point Likert-type items with responses anchored by "strongly agree"(1) and "strongly disagree"(7) at the extremes, with zero indicating "uncertain". The range of possible scores is from 40 to 280, with a higher score indicative of more closed mindedness. Rokeach (1960) reported reliability coefficients ranging from .68 to .93 for internal consistency and from .71 to .84 for test-retest over a one to six month period for university students and VA domiciliary residents.

Nine indexes of interviewing skills performance were included as part of the Behavioral Sciences 10-week interviewing skills curriculum. These included 1) small group performance, 2) video rating by supervisor, 3) video rating by outside expert, 4) final exam grade, 5) final course grade, 6) pre-communication index, 7) pre-discrimination index, 8) post-communication index, and 9) post-discrimination index.



## Procedure

The interviewing skills curriculum was based on a variation of Carkhuff's (1969) Human Relations Training in which attending, observing, listening, and responding to content, feeling, and meaning were emphasized. The first hour of each three-hour weekly session was allotted for presentation of the material, while the remaining two hours were allotted for practice in small groups of approximately six students and a group leader, who evaluated each student. Each student-physician conducted a 20-minute videotaped interview with a screened patient who discussed a real psycho-social problem. The videotape was then replayed and discussed by the student-physician, screened patient, and a supervisor. Each videotape was evaluated independently by both a supervisor and an outside expert rater. A final exam comprised of objective and short answer type questions was administered at the end of the term. Students' small group performance evaluation, video rating by supervisor, video rating by outside expert, and final exam grade contributed equally to their final course grade.

In addition, Carkhuff's (1969) Standard Index of Discrimination (closed response format) and an abbreviated form of the Standard Index of Communication (open response format) were completed by students during the first week of school and again after the completion of training. These indexes are both scored according to Carkhuff's (1969) Levels of Responses Scale. The Dogmatism Scale - Form E was administered at the beginning of the following term.

## Results

The mean score on the Dogmatism Scale was 142.84 with a standard deviation of 19.00. This finding is consistent with those reported by Rokeach (1960) for university students. There were no significant differences between males and females.

A summary of the Pearson Product correlations between closed mindedness and the nine interviewing skills performance measures is presented in Table 1. The relations of dogmatism with small group performance and the communication and discrimination indexes (both pre and post) were nonsignificant. However, the correlations of closed mindedness with both the supervisor and outside expert's video ratings, the final exam grades, and the final course grades were significant and ranged from .29 to .38. This indicates that more closed minded student-physicians performed better on these measures of interviewing skills. These relations, while significant, are not particularly strong, as no more than 14 percent of the variance is shared between the dogmatism and interviewing skills measures.

Table 1

Pearson Product Correlations of Closed Mindedness with  
Interviewing Skills Indexes of First-Year Medical Students

Index	n	r
Small Group Performance	55	-.02
Video Rating by Supervisor	55	.29*
Video Rating by Outside Expert	55	.38**
Final Exam Grade	50	.32*
Final Course Grade	50	.33*
Pre Tests		
Communication Index	47	-.07
Discrimination Index	50	.20
Post Tests		
Communication Index	39	.08
Discrimination Index	38	.07

\*p<.05

\*\*p<.01

In order to determine whether more open minded students were more likely than closed minded students to improve their interviewing skills, dogmatism scores were correlated with the difference scores on the pre and post communication and discrimination indexes (Linn & Slinde, 1977). Neither the partial correlation of dogmatism with the communication (.20) nor the discrimination (-.14) post indexes with the effects of the pre indexes removed were significant. Thus, neither more open nor closed minded student-physicians improved any more than the other on these measures as a result of training, even though students significantly improved from pre to post testing on both these measures as a result of the interviewing skills curriculum (Engler, Saltzman, Walker, & Wolf, note 1).



### Discussion

Contrary to the anticipated relations, open-mindedness was not positively associated with either superior interviewing skills performance or improvement as a result of interviewing skills education. More closed minded student-physicians were actually more likely to perform better on the screened patient videotaped interviews, as well as on the written final exam, although this relationship was not very strong. Kemp (1962) offered an observation that may be helpful in understanding this finding.

The more closed-minded, the greater the possibility that the counselor-in-training will stimulate change in accordance with the expectancies of the situation. This change is likely to be phenotypical, "party-line" change rather than integrated concepts and new directions for action (p. 157).

Following this line of reasoning, it is possible that students who responded more closed mindedly on the Dogmatism Scale were more likely to "buy into" the interviewing skills training model presented to them by their professors, who they, perhaps, look up to and admire. Thus more dogmatic thinkers may mold themselves in the image of their mentors. Their more open minded cohorts, on the other hand, may have objected to the rigidly structured curriculum, regardless of its content.

When one examines the items comprising the Dogmatism Scale, this finding may not be as surprising as it first appears. Fifteen of the 40 items are concerned with self-proselytization, power and status, acceptance of authority, and beliefs in a cause, with stronger agreement indicative of more closed mindedness. For example, students more strongly agreeing with the following statements are considered to be more dogmatic: "While I don't like to admit this even to myself, my secret ambition is to become a great man...; If given the chance I would do something of great benefit to the world; It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects." Given the esteem in which physicians are held by society, the power they exercise over the lives of their patients, their helping "mission", and their relative position of authority, these findings may be more understandable.

While Rokeach (1960) attempted to construct a content free measure of dogmatic thinking, Goldstein and Blackman (1978) observed that individuals with rightist political positions tend to score higher on the scale than persons whose orientation is leftist, contrary to Rokeach's intentions. It is widely recognized that physicians as a group tend to be more conservative, and this may be reflected in student-physicians as well, again making the present findings more comprehensible. It should be



remembered, however, that on the average this sample of medical students responded very similarly to results previously reported for their non-medical peers. Thus, while more closed minded students, in relation to their medical student peers, performed better on some of the interviewing measures, as a group they appeared to be no more closed minded than their non-medical peers, although this hypothesis was not directly tested in the present study. In addition, Marcus (1964) found fourth-year medical students were significantly less dogmatic than first-year students. Thus, it is plausible to expect these first-year students to become more open minded as they progress through their program. Also, all students on the average improved significantly on the Carkhuff Standardized Communication and Discrimination Indexes as a result of the interviewing skills curriculum (Engler et al., note 1), and there was no advantage in improvement related to individuals' self-reported dogmatism. It is recognized that the above explanations are offered post hoc, and that further exploration of these speculations may be warranted before they can be confirmed.

#### Reference Note

1. Engler, C. M., Saltzman, G. A., Walker, M. L., & Wolf, F. M. Enhancing medical communication: Student-physicians' acquisition and retention of interviewing skills. Manuscript submitted for publication.

#### References

- Carkhuff, R. R. Helping and human relations: A primer for lay and professional helpers (Vol. 1 & 2). New York: Holt, Rinehart & Winston, 1969.
- Daly, M. B. & Hukla, B. S. Talking with the doctor. Journal of Communication, 1975, 23, 148-152.
- DiMatteo, M. R. A social-psychological analysis of physician-patient rapport: Toward a science of the art of medicine. Journal of Social Issues, 1979, 35, 12-33.
- Goldman, K. M. & Blackman, S. Cognitive Style: Five approaches and relevant research. New York: Wiley, 1978.
- Kalin, G. S., Cohen, B., & Jason, H. The teaching of interpersonal skills in U. S. medical schools. Journal of Medical Education, 1979, 54, 29-35.
- Kemp, C. G. Effect of dogmatism on critical thinking. School Science and Mathematics, 1960, 40, 314-319.

- Kemp, C. G. Influence of dogmatism on counseling. Personnel and Guidance Journal, 1961, 39, 662-665.
- Kemp, C. G. Influence of dogmatism on the training of counselors. Journal of Counseling Psychology, 1962, 9, 155-157.
- Kemp, C. G. Behaviors in group guidance (socio process) and group counseling (psyche process). Journal of Counseling Psychology, 1963, 10, 373-377.
- Linn, R. L. & Slinde, J. A. The determination of the significance of change between pre- and post-testing periods. Review of Educational Research, 1977, 47, 121-150.
- Marcus, E. H. Dogmatism and the medical profession. Journal of Nervous and Mental Disease, 1964, 138, 114-118.
- Rokeach, M. The open and closed mind. New York: Basic Books, 1960.
- Shuy, R. W. The medical interview: Problems in communication. Primary Care, 1976, 3, 365-386.