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### Abstract

This study examined the effects of audio and video recording on clients when recording is done for the purpose of counselor supervision. Video recording inhibited the self-exploration of clients with personal problems and it also resulted in less satisfaction with counseling. Both recording methods inhibited self-exploration in clients with educational-vocational problems, but neither method affected their satisfaction. Recording methods also affected clients' self-reports of the extent to which they felt inhibited by these methods, and the effect was equal across problem types. The effects of recording did not decrease from the first to the second interview. Recording did not affect clients' responses to or counselors' ratings of their clients on an excitation-inhibition scale.

## THE EFFECT OF AUDIO AND VIDEO RECORDING ON CLIENTS

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Does audio and video recording inhibit clients and thus interfere with the therapeutic process and its outcomes? Despite the fact that counseling and psychotherapy sessions have been recorded for over 30 years now (Rogers, 1942), an extreme paucity of research exists which might provide answers to this question. Notwithstanding the early psychoanalytic contention that a third party markedly changes the quality of the therapeutic experience for both the therapist and patient (Carmichael, 1966), the use of audio recording has become common practice, particularly in practicum supervision (Roberts & Renzaglia, 1965). In addition, the use of video recording appears to be accelerating to a point where it too may soon become common (cf. Jackson, 1966; Ryan, 1969).

The very few early studies of the effects of audio recording on clients were quite limited methodologically and conceptually. These investigations revealed that clients typically assented with little or no overt resistance to their therapists' requests to record their sessions (Lamb & Mahl, 1956; Kogan, 1950) and that clients' behavior during therapy did not differ globally (behavior was not rated on specified dimensions) when aware versus unaware of being recorded (Harper & Hudson, 1952). Despite their limitations, some firmly held clinical lore seems to have developed from these studies. Such lore has it that recording is appreciably more disturbing to the therapist than the client (Gill, Newman & Redlich, 1954) and that therapists' fears that recording will inhibit their clients are typically projections of their own anxiety over being observed (Harper & Hudson, 1952;

Lamb & Mahl, 1956). In addition, the belief has been long maintained that if recording does inhibit clients, such inhibition dissipates in a very short time (Kogan, 1950). These beliefs also appear to have been applied to the effects of video recording (e.g., Bergman, 1966), although only one study, a survey (VanAtta, 1969), has examined clients' reactions to such recording.

This early research seemed to settle the issue, for no additional studies were conducted until Roberts and Renzaglia's (1965) relatively well-controlled experiment. Their study revealed that university clients emitted a greater percentage of positive self references when aware of being audio recorded and a greater percentage of negative self-references when unaware. Counselors were less client-centered when aware of recording, despite the fact that their training was in client-centered therapy. Since awareness of recording was manipulated in the counselor and client simultaneously this research does not reveal if audio recording affected both participants directly or if it affected one member of the pair and the resulting differences in his responses, rather than the recording, caused differences in the other participant's behavior.

In the aforementioned survey by VanAtta, applicants for counseling at a university counseling center expected to feel least inhibited if their interviews were unobserved and most inhibited if observed by visual methods. They also expected visual methods to be more inhibiting when discussing personal as compared to vocational indecision or study problems. While VanAtta's study has the merit of being the only one to date which elicited clients' feelings about recording, it is limited by the fact that it examined expectations rather than actual effects on clients.

The present study attempted to assess experimentally for the first time the effects of both audio and video recording on clients. A second purpose was to determine if the effects of recording depend upon the type of problem with which the client seeks help (personal vs. educational-vocational in this study). A final purpose was to gather evidence on whether the effects of recording reduce or dissipate as quickly as clinical lore suggests (e.g., Harper & Hudson, 1952). This was accomplished by comparing the effects during an initial versus a second interview. It seems likely that the manner in and extent to which recording affects clients depends to an important degree on what clients believe is the purpose of recording. In the present study clients were led to believe that recording was conducted for the purpose of counselor supervision.

#### Method

##### Subjects and Subject Selection

The subjects were 60 students enrolled in an introductory psychology course at a Midwestern university. To recruit Ss a sign-up sheet was posted on a bulletin board where all subject sign-up sheets for psychology experiments were posted. Students were informed that if they met the criteria for Ss they should sign up by visiting E's office during designated times. The criteria for Ss, as indicated on the sign-up sheet, were that students should have "real, meaningful problems of an educational-vocational or personal nature (examples given) which you wish to discuss with and get help in solving from a trained counselor (doctoral student in counseling)". It was indicated that counseling would be for 2 sessions, one week apart.

When students visited E's office, he reiterated the above criteria, emphasizing that Ss must be real clients with real (vs. role-played) concerns with which they desired help. They were told that the purposes of

the project were to give doctoral student counselors greater opportunity to do counseling and as a result to give clients legitimate help and to allow E to do research on counselor-client communication. The confidentiality of the sessions was stressed and students were told that they could go as deeply into their problems as they wished. E suggested that Ss probably should not expect to solve their problems in 2 sessions but might best use the sessions as a chance to explore their problems. If desired, additional counseling would be made available following the 2 interviews. If at the end of this discussion (typically 10-20 minutes in duration) both E and the student felt that participation was appropriate, the student was given a checklist containing examples of educational-vocational (e.g., vocational indecision, school achievement) and personal (fairly typical therapy problems, e.g., feelings of inferiority, interpersonal problems, etc.) problems. Here he indicated which of these 2 categories his problems essentially fell into.

To obtain the 60 Ss required for the experiment, 72 students were screened in the above manner. Most of those who decided not to participate indicated that they had not read carefully the "criteria for Ss" on the sign-up sheet and did not have problems of the type specified that they wished to discuss with a counselor. The experiment was arranged so that there would be 30 Ss in each of the 2 problem categories.

#### Counselors

The counselors were 9 doctoral students in counseling, 8 of whom had completed at least 2 practicums prior to the experiment. Counselors met with E one week prior to the beginning of the counseling. They were informed of the general purposes of the study, and that counselor behavior (e.g., effectiveness) would not be rated.



Since it was necessary to hold constant differences in counselor behavior due to recording methods (except as it might be mediated by the effect of recording on the client), counselors were informed that a segment of all interviews would be audio recorded only (the actual procedure) and that, in fact, the treatment was the pre-set about the recording procedure E gave to S. Counselors were not informed of this pre-set. They were instructed not to elicit it from S but to concentrate only on helping their clients as in any counseling encounter. If a client verbally or non-verbally revealed his pre-set to his counselor, the counselors were told to deal with this as they would in any counseling situation. This occurred in only 7 of the 120 interviews (only once verbally) and in 5 of these instances the counselor's impression was incorrect.

Counselors were encouraged to use their own counseling style (most would call themselves eclectic) but were warned against being too prescriptive just because of the time limits. Referral sources were discussed, and it was agreed that the last 5-10 minutes of the second session with each client should be used to discuss referral.

#### Procedure

Since each S classified his problems into 1 of 2 categories and since 3 recording conditions were employed, 6 treatment combinations were contained in the experiment. Assignment to recording condition was made on a random basis. Each counselor was assigned an equal number of clients in each treatment combination (8 counseled 1 client under each such combination and 1 counseled 2 clients). S was assigned a counselor and appointment time at the end of his "sign-up" interview. He was assigned an hour which was convenient for him and for which a counselor was scheduled who did not already have scheduled the maximum number of clients with the problem type of that particular client, i.e., 3 of each type for 8 counselors and 6 for the 9th. Then, each S was

assigned to 1 of 3 recording conditions. For each counselor the order in which his clients within each problem category were assigned was randomized through a coin-tossing procedure prior to the experiment. For example, Counselor X's order might be Audio, Minimum Audio, Video; thus the first client assigned to him within each problem category would be placed in the Audio Recording condition, the second in the Minimum Audio condition and the third in the Video condition.

In its final form the experimental design was completely crossed and balanced. Thirty Ss in each of 2 problem categories (N=60) were counseled under 1 of 3 recording conditions. Thus, 10 Ss were contained in each of 6 problem category X recording condition treatment combination cells.

The main independent variable was the recording condition under which S was counseled. (Problem Category and Interview Number were of interest only inasmuch as they interacted with the main variable, i.e., their main effects were not of interest.) The treatment actually was what S was led to believe (his "pre-set") his recording condition would be. In fact, all sessions were audio taped between minutes 10 and 20.

Subjects were instructed at the end of the "sign-up" interview to visit E's office immediately preceding their first counseling session. Here E induced the pre-set. The following responses were made to all Ss:

"Hello-----. How are you doing? (usually light conversation). As I believe I mentioned when we first got together, what goes on between you and your counselor will be confidential. The only person the counselor will discuss the counseling sessions with is his supervisor, who is a qualified psychologist with a doctor's degree. Now, you will notice that there is a video camera and a microphone in the room. This is standard apparatus in these counseling rooms."

Immediately following the above information, the following differential pre-sets were given to Ss in the different recording conditions:

Minimum Recording Group:<sup>1</sup> "The video camera will not be used during your interviews. Just a few minutes of each interview will, however, be taped on the audio tape recorder. The taping will occur during the latter part of each of your sessions. It is strictly for my research on counselor-client communication, is completely confidential, and will definitely not be used beyond this point. Okay?"

Audio Recording Group: "The video camera will not be used during your interviews. Each interview will, however, be taped on the audio tape recorder. This is strictly for my research on counselor-client communication and for supervision, so that the counselor's supervisor can do a better job in supervising him. It is completely confidential and will definitely not be used beyond this point. Okay?"

Video Recording Group: "The interviews will be taped on the audio recorder and filmed on the video camera. This is strictly for my research on counselor-client communication and for supervision, so that the counselor's supervisor can do a better job in supervising him. It is completely confidential and will definitely not be used beyond this point. Okay?"

A careful attempt was made to present each of the pre-sets in an equally casual manner. The pre-set was clarified in response to questions, but information that might alter the pre-set was not added. Following questions, if any, E escorted S to the counseling room and introduced him to his counselor.

All Ss participated in 2 counseling interviews (generally 45 minutes in duration) 1 week apart. Counseling was conducted in a standard practicum room. A small microphone was situated at the desk, and a video camera which was connected to the wall was focused on a point midway between the counselor and

client as they faced each other. The camera was approximately 6 ft. from the participants. Moreover, every effort was made both to render the recording apparatus as unobtrusive as possible and to approximate as closely as possible the recording procedures in counseling practicums.

Subjects were completely debriefed after they completed certain questionnaires following their second interview. No S raised objections to the experimental deception, possibly because no treatment was more exposing than S had been led to believe. During debriefing, referral sources were again discussed and 16 Ss (14 with personal problems) asked for continued counseling. A check during the debriefing sessions revealed that 59 Ss believed their pre-set.

#### Dependent Variables and Their Measurement

Dependent variables and measures were based on prior recording research and/or E's expectations about the manner in which recording might affect clients. Following their second session Ss completed the Counseling Evaluation Inventory (Linden, Stone, & Shertzer, 1965), a 21 item questionnaire consisting of 3 factors: counseling climate, counselor comfort and client satisfaction. In this same sitting Ss completed a 6-item questionnaire which elicited opinions on various aspects of the recording procedures. The critical item on the questionnaire asked Ss to "rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of your counseling sessions." Ratings were made on a 5-point scale, ranging from 1 (not inhibited) to 5 (extremely inhibited). After the second session Ss completed a slight modification of VanAtta's (1969) questionnaire consisting of 9 statements which describe feelings during counseling along an excitation-inhibition continuum. At this time subjects responded by selecting the one statement which best described their feelings during their first and their

second interviews separately. Each S's counselor also completed the VanAtta Scale in reference to his client after each session.

Finally, Carkhuff's Helpee Self-Exploration Scale, a 5 point scale which has yielded highly acceptable reliability (Carkhuff, 1969), was employed. Sixty of the 10 minute taped segments were rated by E and one rater, and the remaining 60 by E and a second rater. Each set of 60 segments was organized so as to consist of an equal number of first and second interviews and an approximately equal number from each recording condition and problem type within recording condition. Raters were blinded on the experimental conditions under which interviews were held. The correlation between ratings made by the members of one set was .82. Ratings were not noted for the second set, although subjectively they seemed to be at least as similar. Both sets of judges rated 10 randomly selected segments one month apart and the between-set correlation was .92.

### Results

Three-way analyses of variance (recording condition X problem type X interview number) were computed on client responses to the VanAtta excitation-inhibition questionnaire, and counselors' ratings of their clients on this scale. No significant (alpha set at .05) main effects on these variables were found for recording condition. Neither did recording condition significantly interact with problem type or interview number, although trends toward a recording condition X problem type interaction were found on clients' self-ratings, and toward a main effect for recording condition on counselors' ratings of their clients.

Analyses of variance of the 3 factors in the Counseling Evaluation Inventory revealed a significant interaction effect of recording condition by problem type for the Client Satisfaction factor. ANOVA results for this factor are presented in Table 1. Table 2 presents means and standard deviations for each recording

condition and problem type and for both problem types combined on the Client Satisfaction factor.

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Insert Tables 1 and 2 About Here

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Table 2 reveals that for Ss in the personal category those counseled under video recording conditions gave lower mean ratings on the Satisfaction factor than those in the other 2 groups. This pattern is not reflected for Ss in the educational-vocational category, where differences among means in the 3 recording conditions are negligible.

Since the F ratio for the AB interaction on Client Satisfaction attained significance, Duncan's multiple range test was employed to analyze simple main effects (recording conditions within each problem type). For Ss in the personal-social category the video recording condition differed significantly from both the audio ( $p < .05$ ) and minimum audio ( $p < .05$ ) conditions.

Subjects responses to the item "rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of your counseling sessions" were analyzed by computing z ratios of the difference between the proportion of Ss who felt at least slightly inhibited (alternatives 2, 3, 4 and 5) in each recording condition. The proportion of clients who felt at least slightly inhibited was greatest for those counseled under video conditions (55%), least for those under minimum audio conditions (25%), and intermediary for those under audio conditions (35%). The difference between video and minimum audio attained marginal significance ( $\bar{z} = 1.94$ ,  $p = .052$ ). This same pattern emerged when problem types were analyzed separately, although between-recording condition differences did not attain statistical significance because of the smaller n's.

A 2 X 2 X 3 analysis of variance was computed on ratings on the Helpee Self-Exploration Scale and is presented in Table 3. A significant main effect of recording and a significant interaction between problem type and recording condition occurred. The interaction between recording condition and interview number, however, is nonsignificant indicating that the differential effects of methods of recording are not dependent upon the number of the counseling interview. Table 4 presents the means and SD's for self-exploration.

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Insert Tables 3 and 4 About Here

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Duncan's multiple range test was employed to compare specific means. For overall self-exploration scores (problem types and interview number combined; see the bottom row of Table 4) as reflected in the main effect of recording condition, significant differences emerged between the audio and minimum audio conditions ( $p < .01$ ) and the video and minimum audio conditions ( $p < .01$ ). The video and audio conditions did not differ significantly from each other. Thus, self exploration under minimum audio recording was significantly greater than that under either video or audio recording. Specific comparisons were also made for self-exploration under different recording conditions within each problem category, since the interaction between recording condition and problem type attained significance. Within the personal category, the difference between the video condition as compared to the audio and the minimum audio conditions attained significance ( $p < .05$ ). Finally, within the educational-vocational category, self-exploration was significantly greater under the minimum audio condition than either the audio or the video condition ( $p < .01$  in each case). Although not of major interest in this experiment, Table 3 reveals a significant main effect for the subsidiary independent variable, interview number.

## Discussion

An important limitation of the present study resides in the use of the minimum audio recording group, a quasi-control group. Such a group was felt to be important for ethical reasons, but methodologically it is inferior to a true control group in which Ss are led to believe that their sessions are not recorded at all. This is particularly true for variables on which differences between audio and minimum audio recording were not uncovered. Audio recording for a few minutes may have an effect equal to recording an entire interview, whereas both may differ on a particular variable from counseling done without any recording.

A central result was that recording does appear to affect clients in certain ways and that the nature of this effect depends in part on the type of problem clients bring to counseling. For clients with self-reported personal problems, video recording inhibits self-exploration and attenuates satisfaction with counseling. For clients with educational-vocational problems both video and audio methods inhibit self-exploration in counseling, yet neither method reduces satisfaction.

Why the differences between problem types? While a thorough explanation must await additional research, it is plausible that educational-vocational problems are experienced by clients as less urgent and/or affect charged than personal problems. If so, it would make sense that a less exposing method of observation (audio) would inhibit self-exploration while at the same time these clients would not be less satisfied with the counseling they receive. That is, since their problems are less urgent and/or affect charged, inhibition in exploring them might not be very disturbing. Conversely, clients with personal problems, because of the higher degree of urgency or affect attached to their



problems, may require a more exposing method (video) to be inhibited; when this occurs it would follow that these clients would be dissatisfied.

Although seemingly contradictory, the above interpretation may be compatible with the finding that self-reported inhibition due to recording was independent of problem type. Thus, a given method of recording may produce the same feeling of inhibition (as reflected in self reports) in clients in the two problem categories, yet actual self-exploration (as reflected in ratings of taped segments) may be more easily inhibited in clients with educational-vocational problems for reasons noted in the above paragraph.

Unexpectedly, interview number did not interact with recording condition for any dependent variable. Thus, the effects of recording did not decrease or dissipate during the second interview. This does not support the aforementioned belief that anxiety caused by recording is highly transitory. Of course, a two-interview sample is hardly sufficient to ascertain if the effects dissipate gradually. Yet if the clinical lore were valid one would expect at least a trend in the data toward a reduction across two sessions. Such an effect would seem especially important in light of the brief duration of much psychotherapy and counseling, e.g., approximately 30 to 60 percent of the clients at several out-patient facilities were found to terminate in six visits or fewer (Feldman, Lorr & Russell, 1958; Garfield & Kurz, 1952; Kurland, 1956).

The results of the present study would appear to apply most directly to very brief or time-limited therapy or counseling. Research is needed to uncover the effects of different methods of observation on longer term open-ended treatment. For example, do the effects eventually disappear? Do they preclude longer term work (result in more premature terminations) since video recording seems to dampen satisfaction of clients with personal problems? While no formal research exists which is pertinent to these questions, it is noteworthy that a

case study reported by Carmichael (1966) revealed that the therapist felt his client was largely unaware of video recording during 19 analytically-oriented sessions. Scrutiny by the therapist of his own notes and films six months after the therapy, however, led him to believe that the client showed much awareness. It may be significant that during the sessions the therapist was quite aware of his own anxiety over the recording, but not his client's. This is consistent with Tanney and Gelso's (1972) observation that in an initial interview therapists generally misperceive the anxiety their clients feel due to video recording. What clients report and independent raters perceive to be inhibition, therapists frequently interpret as disinhibition or self-exploration!

While classification of clients into such broad problem types as personal and educational-vocational is quite encompassing, it would be helpful to determine if the effects of recording are moderated by other client variables such as severity of disturbance, traditional diagnostic classification, personality traits, etc. One preliminary study (Gelso & Tanney, 1972) suggests that clients with highly compulsive personality traits are most likely to report inhibition due to audio recording, but this research has only begun to scratch the surface. Additional research along these lines should help answer the critical question of what clients should be recorded under what conditions.

In conclusion, the results support the more naturalistically-based findings of VanAtta (1969) and Carmichael (1966) in that recording procedures were found to have adverse effects on clients. In addition, the results extend those of the aforementioned studies and reveal some of the important subtleties and complexities of the manner in which recording affects clients. When the findings are combined with those of the early recording studies (Harper & Hudson, 1952; Kogan, 1950; Lamb & Mahl, 1956), it also seems clear that the client's

consent to be recorded provides little if any indication of whether recording will affect his counseling behavior. The effects are more subtle than that. Finally, the fact that effects do occur dictates greater caution on the part of therapists and therapist-supervisors in determining whether to record a particular client's sessions and the method of observation to be employed. The differential benefits of various observation methods need to be weighed against the possibly adverse effects.

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Table 1  
ANOVA on the Client Satisfaction Factor

Source	SS	df	MS	F
Recording Condition (A)	17.1	2	8.6	.93
Problem Type (B)	.1	1	.1	.01
A X B	63.7	2	31.9	3.47*
Error	497.3	54	9.2	

\*  $p < .05$

Table 2  
Means and SD in the Client Satisfaction Factor\*  
of the Counseling Evaluation Inventory

Problem Category	Video		Audio		Minimum Audio	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Personal-Social	11.6	3.6	14.5	2.0	15.3	3.8
Educational-Vocational	14.7	2.1	13.4	2.9	13.7	2.2
Per.-Soc. + Educ.-Voc.	13.2	3.3	14.0	2.3	14.5	3.2

\* Two items on this 7 item factor pertained to test interpretation.  
Since this was never employed the items were deleted.

Table 3  
ANOVA for Helpee Self-Exploration

Source	SS	df	MS	F
<u>Between Ss</u>				
Recording Condition (A)	42.9	2	21.5	5.97**
Problem Type (B)	29.0	1	29.0	8.06**
A X B	28.2	2	14.1	3.92*
Error	192.2	54	3.6	
<u>Within Ss</u>				
Interview Number (C)	18.4	1	18.4	23.00**
A X C	1.1	2	.6	.75
B X C	3.0	1	3.0	3.75
A X B X C	1.4	2	.7	.88
Error	44.1	54	.8	

\* =  $p < .05$

\*\* =  $p < .01$



Table 4  
Means and SD's on Helpee Self-Exploration\*

Problem Type	Video		Audio		Minimum	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
<b>Personal-Social</b>						
Interview 1	2.9	.77	3.3	.64	3.4	.54
Interview 2	2.3	.98	3.0	.82	2.7	.81
Interviews 1 & 2	2.6	.93	3.1	.75	3.1	.77
<b>Educational-Vocational</b>						
Interview 1	2.4	.71	2.1	.70	3.2	.59
Interview 2	2.0	.50	1.9	.59	3.1	.61
Interviews 1 & 2	2.2	.61	2.0	.66	3.1	.60
<b>Pers.-Soc. + Educ.-Voc.</b>						
Interview 1	2.7	.79	2.7	.89	3.3	.58
Interview 2	2.2	.79	2.4	.90	2.9	.74
Interviews 1 & 2	2.4	.79	2.6	.89	3.1	.69

\* The higher the score, the greater the degree of self exploration on this scale.

## Footnotes

<sup>1</sup> The minimum audio recording condition was used rather than a true control group in which Ss were led to believe that their sessions were completely nonrecorded because of the possible ethical problems contained in the latter method.