Automaticity as a Factor
in Counsellor Skills Acquisition

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Abstract

The purpose of this exploratory study was to observe the work of mental health and school counsellors in their initial supervised experience to determine whether some behaviours become automatic during the first six months of supervision. Attending skills and skills that facilitate disclosure were found to be present significantly more often at the conclusion of the supervision period. However, neither diagnostic nor relationship-building skills improved significantly. Certain behaviours seen as inappropriate to the counselling interaction (e.g., social distancing) declined early in the experience but began to reappear between three-month and six-month observation points. Implications for supervision are presented.

Résumé

Le but de cette étude exploratoire était d'observer le travail des conseillers scolaires et ceux du milieu psychiatrique dans leur expérience initiale de supervision pour déterminer si certains comportements deviennent automatiques au cours des six premiers mois de supervision. Les habilités d'écoute et les habiletés qui facilitent l'ouverture ont été trouvées présentes significativement plus souvent lors de la conclusion de la période de supervision. Toutefois, ni les habilités de diagnostic et celles de développement de la relation ne se sont améliorées de façon significative. Certains comportements vus comme inappropriés à l'interaction en counseling (par exemple, distanciation sociale) déclinait tôt dans l'expérience mais commençait à réapparaître entre le troisième mois et le sixième mois des points d'observation. Les implications pour la supervision sont préséntées.

There are a variety of strategies to prepare counsellors for their work, yet essentially all counsellor education programs place confidence in the value of practice during practica and internships for the development of counselling skills. In this research, counsellors were observed at intervals throughout a six-month practicum and internship to gain insight about skills acquisition. The project was inspired by the work of Benjamin Bloom (1986) who found that extensive and repetitive practice was the essential ingredient in the acquisition of component skills in a variety of complex tasks. Bloom observed that when practice was continued until overlearning occurred, the basic components of complex activity became automatic – performed without conscious attention.

Automaticity in the simple subtasks of a complex activity frees attentional capacity for more complex information processing. An illustration of this concept can be found in the ordinary ability to walk and carry on a conversation at the same time. Walking is sufficiently automatic to re-

quire minimal attention and frees cognitive capacity to engage in the nuances of conversation.

Our observations in this study sought to establish whether certain specific counsellor behaviours become automatic with practice and whether some behaviours are more quickly established to a level of automaticity than others. A more complete understanding about the ease with which certain skills become automatic has implications for supervision during pratice-oriented courses.

Interest in the function of automaticity in counsellor information processing was stimulated by Benjamin Bloom's (1986) preliminary report of a five-year study of pianists, sculptors, tennis stars, Olympic swimmers, research mathematicians, and research neurologists. He identified 25 top performers under the age of 35 in each of these fields and then sought to learn how they had achieved their high levels of performance. Bloom (1986, p. 72) concluded that much time and over-learning was necessary "to develop automaticity in the many subskills required to reach top-level performance" in these very diverse fields.

Bloom quoted an early study (Bryan & Harter, 1899, p. 375) to clarify the mechanism of automaticity. Bryan and Harter describe the way in which practice allows a performer to do "with one stroke of attention" that which had previously required attention to several separate compo-nents. Continued practice increases the range of material that can be processed without specific attention to the parts. This acquisition of "automatic habits" allows greater efficiency of effort.

Automaticity in information processing has been the subject of recent study as it relates to a number of skills: reading (Samuels & LaBerge, 1983), organization in free recall in children (Bjorklund & Jacobs, 1985), children's spatial and colour memory (Park & James, 1983), mathe-matics (Wachsmuth, 1983), and social decision-making (Knight, Berin-ing, Wilson & Chao, 1987).

Unlike Bloom's work, these studies focus on children trying to gain initial competence in performance of the activities. Samuels and La-Berge's (1983) work in reading is illustrative of the studies of automa-ticity in children's learning. They explain that word recognition is dependent on the automatic recognition of letters and that comprehen-sion of meaning is dependent on the automaticity of the entire decoding process including both letter and word recognition.

Patterson (1988) relates the concept of automaticity to the learning process experienced by counsellors as they gain initial competence in the conduct of therapeutic counselling sessions. He postulates that several functions are processed simultaneously by the counsellor: listening and relationship building, collecting information, generating responses, for-mulating diagnostic hypotheses, and treatment planning. "Taken to-gether the several [sub]tasks place a severe load on the conscious process

of the [beginning] counselor, although each has, perhaps, been practiced in a laboratory situation" (p. 195). Patterson observes that in order to improve instructional efficiency, most supervisors concentrate first on the functions towards the beginning of the list (listening and relationship building, generating responses, and collecting information) and proceed to the more complex tasks of diagnosis and treatment planning after the foundational tasks have become at least partially automatic.

Shiffrin and Dumais (1981) state that almost all processes of sufficient duration to sustain interest will consist of automatic and controlled processes (not yet automatic, and demanding attention to detail). Counselling qualifies as a process of sufficient duration to include automatic processes even though they have not been observed and reported in the literature. Patterson (1988) states that beginning counsellors are expected to avoid certain automatic responses accumulated in social situations as well as learn new automatic behaviours appropriate to the counsellor's role.

One kind of behaviour that new counsellors are asked to avoid is the practice of discouraging potentially uncomfortable personal disclosures. In social situations we are trained to create distance (e.g., by disengaging from a couple who try to work out their financial problems in the middle of a cocktail party). In counselling, one encourages personal disclosure rather than distancing oneself from it. Further, the beginning counsellor learns that a counselling session differs from an investigative interview designed only to collect information (e.g., as may be used in news reporting). Patterson hypothesizes that counsellors who learn to attend automatically, to paraphrase spontaneously, to habitually maintain a stance of empathic listening, to focus on goals and barriers naturally, and to use scientific problem-solving with ease, would then have reserve attentional capacity for the more complex processes of diagnosis and treatment planning.

The purpose of this exploratory study was to observe the work of mental health and school counsellors in their initial supervised experience to seek evidence about whether some behaviours become automatic during the first six months of supervision. We also sought to identify what behaviours might be subject to automaticity training.

The research questions were:

1. Is there evidence that certain categories of counsellor behaviours develop to a level of automaticity in an initial six-month supervised counselling experience?

2. If so, what are those behaviours?

3. Do self-ratings of counselling skills by participants correspond with ratings by trained raters?

Because automaticity is simply a construct used to explain how information is processed during the learning process, it cannot be measured directly. Its presence can be intuited only from the observation of performance. Similarly, "overlearning" is hypothesized as a construct by which automaticity is accomplished and cannot be directly observed. Divers are said to have acquired automaticity when their performance is judged to include an increase in technical elements of excellence on repeated dives. Readers are said to have acquired automaticity when they are able to move through passages made up of previously learned words without stumbling over word recognition. The concept of automaticity provides an explanation of the skills acquisition process across a variety of human activities. The specific sub-skills for a particular activity can only be identified through observation.

In this study, automaticity of counselling skills was operationally defined as an increase in technical elements of performance in repeated measures of counselling skill made at the beginning of the project, after three months, and after six months of practice. The research instruments were based on skills found to be important in current counselling textbooks (see the description of measures below), and served to target the skills that would be observed by raters and by the participants themselves. Automaticity of a particular skill was assumed if statistically significant differences ($p < .05$) among the repeated measures of that skill were found.

<div align="center">METHOD</div>

Sample

Students in two Masters'-level groups beginning their initial supervised counselling experience were studied over a six-month period. All students in the groups agreed to participate (n=17), but three of the total were dropped from the study because complete sets of audible tapes were not available for those students. The participants ranged in age from 28 to 63 ($M = 38$, $Mdn = 33$); 13 female and 1 male. The students had completed all content courses in the Masters' degree program. Three of the participants had two or more years' paid experience in counselling-related occupations (e.g., the ministry) without a formal counselling credential. However, when the tapes of these three individuals made early in practicum were reviewed, there was no indication of special expertise based on their experience. All participants were in field placements, either mental health agencies or schools, where part of their responsibility was direct mental health counselling service to a clientele that was self-, parent-, or teacher-related.

Supervision

The two groups were supervised by two of the authors. Both are experienced counsellor-educators who subscribed to a supervision process of working first with relationship issues and then proceeding to increasingly planned interventions based on diagnostic hypotheses. Supervision was based on the principle that counsellors acquire a set of generic counselling skills during initial supervised experiences that seem to be universal to learning the counselling process (Carkhuff, 1983; Egan, 1986; Hutchins & Cole, 1986; Meier, 1989; Patterson & Eisenberg, 1983). This set of pervasive skills is described further in the section on measures that follows. Though the relationship of theoretical orientation of the supervision to skills acquisition was not a focus of the study, both supervisors operated from an eclectic framework that built from person-centered principles of relationship building to rational and psychodynamic components as prompted by the case material.

Procedure

Participants were informed at the first meeting of their group supervision seminar that their participation was sought in a study to learn more about the acquisition of counselling behaviours as a result of supervised practice. The concept of automaticity was not presented nor was it used as an underlying supervisory strategy. Forms for seeking counsellor and client release on audiotaped and videotaped material were introduced. Each counsellor understood that one counselling session near the beginning, one near the middle, and one near the end of the six-month course would be selected for analysis as a part of the study. In addition, each counsellor completed a demographic information questionnaire and completed a self-inventory of skills at the beginning and the end of the experience.

Measures

The self-rating checklist of counsellor skills was a 73-item list of skills created through a process of examining several introductory texts on counselling process (Borck & Fawcett, 1982; Carkhuff, 1983; Egan, 1986; Evans, Hearn, Uhlemann & Ivey, 1979; Hutchins & Cole, 1986; Martin, 1983; Meier, 1989; Messina, 1982; Okun, 1987; Patterson & Eisenberg, 1983) to determine what skills are commonly assessed by counsellor educators. This checklist was created because we were unable to find an existing scale that included all the areas we wished to assess after a review of the cited texts. One member of the research team abstracted the skills from the texts and formulated the item statements. The three other researchers independently reviewed the items for clarity and face validity as items relevant to counselling effectiveness, then all four met to finalize

the list of skills. Items were arranged into the following five categories based on the typical content outlines of the source texts: attending behaviours, relationship building, facilitating disclosure, diagnosis, and behaviours to avoid (e.g., lecturing). Items were to be rated on a five-point scale from 1 to 5, where 1 represented little or no skill, 3 represented a minimal facilitative level of functioning in the skill and 5 represented exceptionally high performance of the skill.

A protocol of 24 items to be used for rating the performance of the counsellors in the three counselling sessions by expert raters was developed by selecting items from the self-rating instrument that were subject to judgement by tape review. The other items on the student self-report addressed self-referent thoughts that were not observable. The four members of the research team who would serve as raters then rated several counselling sessions that were not a part of the research set with the instrument until all three raters assigned identical ratings on 90% of the items. Minor revisions in the protocol were made in the early stages of this training process. For example, instructions were changed to permit a rater to delete an item if there was no opportunity for introducing the skill in the particular session viewed. (e.g., no overt non-verbal behaviours were exhibited by the client). The item, therefore, neither positively nor negatively affected the counsellor's score.

While space does not permit the inclusion of the self-rating checklist and observer protocol, the following description provides a sense of the items in each of the skill areas. Within the area of attending skills, we sampled behaviours such as maintaining posture that is both attentive and open, establishing appropriate eye contact, responsiveness to paralinguistic client behaviours (such as rapid speech), and attention to non-verbal behaviour. The relationship-building skills included expression of caring, immediacy in communication with the client, the ability to help the client formulate issues in a concrete way, and evidence of awareness of cultural differences of clients. Facilitating skills sampled included the use of paraphrase, open-ended questions, and summary statements, as well as the maintenance of appropriate brevity of response. In diagnostic and action-planning skills, we looked for counsellor awareness of themes in the client's material and for evidence of diagnostic hypotheses in the additive empathy statements of the counsellors as well as specific encouragement for the client to take appropriate actions to initiate change. Behaviours to avoid included premature problem-solving, use of closed-ended questions, sermonizing, etc. (The complete instruments are available upon request from the senior author.)

Rating the Counselling Sessions

Three of the four raters listened to or observed each of the 39 counselling sessions that ultimately made up the data for the study. The raters included the two authors who were not involved with the supervision. The third rater was the supervisor who did not work with the particular student being observed. The student's supervisor was not present at the time of the tape review.

In each case a twenty-minute segment of the counselling, five minutes into the session, was rated. A twenty-minute segment was chosen to provide a substantial work sample, while keeping observational time to manageable proportions. The first five minutes was deleted because we sought to observe working segments free of the distractions of getting settled.

Listening or viewing was accomplished by three raters simultaneously, so that after each session the ratings could be compared and consensus achieved. Consensus was considered to occur when all raters were within one rating point on each item. Prior to consensus, the three raters had identical ratings on 88.2% of the items. Since the researchers have found videotaping to be very stressful for beginning counsellors, the first of the three sessions was audiotaped. For that reason, the observational items on attending had to be eliminated from consideration in the analysis of the data. Sessions two and three, which were made after three months and six months of supervised experience, were viewed in random order so that raters had no information about which was the final tape. The raters had no other exposure to the counselling practice of the individual participants.

Data Analysis

Items from the expert rating protocol were grouped into the following five sub-score categories: attending behaviours, relationship-building, facilitating disclosure, diagnosis, and behaviours to avoid (e.g., excessive closed-ended questioning), based on the categories of behaviours typically discussed in the basic counselling texts that were reviewed. Multivariate Repeated Measures Analysis of Variance (Kirk, 1968) was employed to test whether any changes occurred on the five sub-score categories across time. Tukey's pairwise comparisons were then employed.

The 24 items on the self-report instrument that duplicated the items on the rater protocol were scored to provide comparable self-rating scores to those of the expert raters. The same data analysis procedure was followed. Data from expert and self-ratings were correlated (Pearson r) to determine whether there were any relationships between those sets of ratings.

Expert Ratings

The Multivariate Repeated Measures Analysis of Variance employed the five expert rating sub-scores as dependent variables and the three time intervals (initial/middle/final) as the repeated measure. As this omnibus test was significant (F $(4,10)$ = 10.0, $p < .05$), Univariate Repeated Measures Analyses of Variance were conducted on each sub-score across the three time periods. If the Univariate F was significant for any subscore, indicating some degree of change across time on that sub-score, Tukey's Honestly Significant Difference Test was employed on all pairwise comparisons of the time intervals.

Table 1 summarizes the combined average ratings of performance by all three raters.

TABLE 1

Average Performance of All 14 Subjects – Expert Ratings

	Time 1 Initial		Time 2 Middle		Time 3 Final	
	Mean	SD	Mean	SD	Mean	SD
Attending	1.5	(1.2)	2.0	(1.2)	2.8	(1.6)
Relationship Building	9.3	(2.9)	9.0	(2.4)	10.1	(2.3)
Facilitating Disclosure	13.0	(3.0)	13.6	(3.0)	15.1	(2.9)
Diagnosis	6.6	(2.6)	7.3	(2.8)	7.2	(3.0)
Behaviours to Avoid	13.4	(2.7)	15.7	(1.8)	15.3	(2.7)

The results of the Univariate Repeated Measures Analyses of Variance appear in Table 2.

TABLE 2

Expert Ratings

Repeated Measures Analysis of Variance Across Three Time Periods

	Obtained F	Sig. Follow-up Test
Attending	6.83*	Time 3 > 1*
Relationship Building	1.48	NA
Facilitating Disclosure	3.87*	Time 3 > 1*
Diagnosis	.53	NA
Behaviours to Avoid	6.64*	Time 2 > 1*

* $p < .05$

All obtained differences in the expert ratings of behavioural performance (attending, facilitating skills, and behaviours to avoid) were in the expected positive direction. While changes from initial to final were only noted in two sub-scores (attending and facilitating skills) changes from initial to middle period of rating were also noted for behaviours to avoid.

Self-Ratings

Items from the self-rating protocol were also grouped into the same five sub-score categories. Self-ratings were gathered at two time periods, Initial and Final. Multivariate Repeated Measures Analysis of Variance (F $(5,9) = 9.8$, $p < .05$) indicate that one or more of the self-rating sub-scores did change from initial to final assessment. Subsequent Univariate Repeated Measures Analysis confirm that all sub-scores increased, on average, from initial self-assessment to final assessment. Table 3 summarizes pre- and post-mean scores in the five categories, as well as the F ratios for the univariate analyses.

TABLE 3

Self-Ratings

Average Performance of All 14 Subjects and Univariate Analyses of Variance

	Initial		Final Obtained		
	Mean	SD	Mean	SD	F
Attending	5.2	(1.3)	7.1	(1.2)	27.1*
Relationship Building	12.1	(3.0)	15.6	(2.2)	17.1*
Facilitating Disclosure	14.1	(4.1)	18.2	(2.5)	23.1*
Diagnosis	7.6	(2.5)	10.8	(2.0)	17.6*
Behaviours to Avoid	11.7	(3.6)	14.4	(1.9)	26.5*

* $p < .05$

Though the direction of change noted by the experts was similar to that revealed by the self-assessments (higher scores across time), the absolute differences of the ratings comparing the experts and the self-ratings were quite large, revealing that the experts gave lower scores to the subjects than the subjects gave to themselves. The correlations between expert ratings and self-ratings were erratic and low across sub-scores for both initial and final time periods.

DISCUSSION

It was our purpose to determine whether certain behaviours of beginning counsellors could be observed to change during the initial supervised experience of six-month duration. Evidence of habituation of

counsellor-like behaviours were posited as evidence of the beginnings of automaticity in those behaviours. We also sought to determine whether the less complex behaviours would habituate sooner, as automaticity theory would project.

We found from direct observation that participants quickly altered their behaviours with respect to behaviours to avoid: giving advice and making value judgements, premature problem-solving, sermonizing, and asking large numbers of closed-ended questions. However, progress was not sustained in the second half of the internship and thus cannot be seen as having become automatic. We believe that participants responded to early feedback that one should not jump to conclusions about one's clients, but as time progressed and they knew their clients better they resumed some behaviours that the expert raters still saw as premature.

Facilitating skills and attending to non-verbal and paralinguistic behaviours of clients developed primarily during the second three months of supervised experience according to the expert raters. It took an initial period of time for new counsellors to increase their skills in such behaviours as the use of paraphrase, open-ended question, summary, and silence, to keep their responses brief, and to become aware of client communication that was not verbal. These behaviours are among the less complex of initial counselling behaviours, and they appear to have become somewhat automatic to our beginning counsellor group as evidenced by their increasingly habitual use of the skills.

No statistically significant changes were found in the expert ratings of relationship-building skills, diagnostic skills, or action-planning skills across time. While the failure to find changes cannot be taken as conclusive evidence that no changes exist, it is consistent with automaticity theory that the more complex counsellor behaviours would be slowest to habituate. A review of the relationship-building items suggest that the sensitivities called for (e.g., direct expression of caring, cultural sensitivities, awareness of the need for concreteness, and statements incorporating events in the counsellor/client relationship) are likely of a higher order than the behaviours included in the facilitating skills or the behaviours to avoid sections. The diagnosis and action-planning categories of skill are probably the most complex of those sampled and thus, according to theory, not as likely to become automatic.

The participants' self-ratings were not helpful in distinguishing which behaviours might be learned more completely in an initial supervised experience. Self-ratings are quite likely a function of more than skills learning. The data indicated that subjects rated themselves as significantly improved in all areas. While this may suggest an increase in feelings of professional competence associated with completing the

supervised experience, it lends little to an exploration of the automaticity hypothesis.

There are several limitations to this study that restrict the generalizability of the results. First is the issue of the fairly small number of participants, a common problem in process analyses made necessary by the extensive time required to complete the expert ratings. This is compensated to some degree by the large number of specific ratings made for each participant. Second, the study for all practical purposes was a study of female counselling trainees; it is possible that males would differ. The gender distribution was a function of which students in the program reached the internship course at a given point in time. Third, all the participants were from a single counsellor education program. Fourth, the decision was made to use audiotapes for the first expert rating to lessen stress on the participants. In retrospect, we believe that it would have been better to use the same medium for all sessions and deal with the stress of the trainees. Finally, we acknowledge that, while the instruments sampled a variety of counsellor behaviours, further work might result in a more complex set of snapshots of the trainees' work and more formal evidence of reliability and validity. Though the results of the study must be regarded as preliminary on the basis of these limitations, promising findings emerged.

In summary, this study provides some initial evidence to indicate that it is possible to identify which counselling behaviours are the least complex and therefore may be subject to early automaticity of performance. Those behaviours that emerged first were the facilitative skills of paraphrase, summary, and open-ended questioning, along with pacing. Responding to client behaviours of a non-verbal and paralinguistic nature was also evident. There is some evidence that beginning counsellors also learn quickly to avoid closed-ended questioning, sermonizing, value judgements, and premature problem-solving. However, gains that participants made in these areas early in the internship were not sustained at the end, suggesting that automaticity had not been achieved. It is possible that both supervisor and counsellor attention to the "behaviours to be avoided" declined after the initial period of practice. The more sensitive aspects of relationship building and the more complex processes of diagnosis and action planning were not observed to improve in this preliminary study of a six-month supervised experience. Further research employing a larger number of subjects and a more refined set of instruments to better capture the nuances of an observed skill over a longer duration is needed to provide a more complete taxonomy of behaviours that may be subject to automaticity training.

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