

PREDICTIVE VALIDITY OF A BEHAVIORAL INTERVIEW TECHNIQUE

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Several scholars suggest that academic researchers thoroughly review interviewing techniques practitioners use to determine their reliability and validity in predicting job performance. The present study examines an interviewing technique used by the Gallup Organization to predict a sales candidate's eventual performance and retention. Results of the study indicate that the customized, structured-behavioral interviewing technique offers substantiated predictive validity and appears to be an effective selection tool for predicting sales success and improving salesperson retention. Furthermore the interview represented a nontraditional method. It was administered by telephone and offered similar results of traditional methods (i.e., face to face interviews). Thus, these findings of generalizable validity could save firms a substantial amount of interviewing costs by utilizing the telephone interview. The study offers four advantages to those interested in practices involved in hiring sales representatives: (a) Real behavioral interview data were used to classify new hires; (b) post-hire performance data were used to evaluate performance and retention of applicants from each behavioral group; (c) proprietary information regarding development of behavioral interviewing techniques was shared; And (d) several performance measures, multiple indicators, were used.

INTRODUCTION

Finding selection techniques to identify successful salespeople has become increasingly important because of the high cost of hiring and training new employees (Adidam 2006; Marshall et al. 2001). Estimated cost to replace an employee can range from two to four times his or her annual earnings (Adidam 2006; Bowers and Kleiner 2005). Furthermore, when employers consider the opportunity costs associated with an empty or underserved sales territory, recovery from damage ascribed to poor selection may take years (Munasinghe and O'Flaherty 2005; Randall and Randall 1990; Richardson 1999).

The disruption of sales force turnover on the remaining sales people can have further negative implications that may be difficult to measure. Beyond servicing their own territories, the remaining sales representatives

may be required to maintain the service of the unmanned territory, which can lead to burnout, lower quality of service to their customers, and loss of morale (Adidam 2006). It is not uncommon for vacant sales positions to remain open for as many as 60 days (Rhoads et al. 1994). Thus, the cost of sales personnel turnover can have a major impact on the sales organization's success. According to Darmon (2004), the cost to replace employees for a large firm can tally to as much as hundreds of thousands of dollars. Gordon and Lowe (2002) estimate that employee turnover is costing American firms at least \$150 billion annually. Thus, companies that develop or adopt more successful selection techniques will have greater long-term success in the marketplace (Marshall et al. 2001).

Marshall et al. (2001) note there has been less research in the area of sales-force selection when compared to other areas of sales-management tasks. Barclay (2001), Dreher and Maurer (1989), and Posthuma et al. (2002) suggest that academic researchers should begin

a thorough study of the selection techniques that practitioners use to determine their accuracy in predicting job performance. Churchill et al. (1985) postulated that many corporations have progressed beyond recruiting methods examined by academic researchers. Companies have the advantage of assessing directly the success of interviewing techniques. Academic researchers have difficulty obtaining such proprietary information; thus, they try to predict sales performance across different sales jobs, different companies, and different industries (Churchill et al. 1985; Randall and Randall 1990). Evidence suggests that to succeed in a particular sales position, different qualifications/skills are necessary based on the industry, company, job, and product (Campbell 1990; Chonko et al. 2000; Randall and Randall 1990).

Posthuma et al. (2002) performed a comprehensive narrative review of the employment interview research since 1989 and compared it to the last major narrative review done by Harris in 1989. The authors reviewed 278 studies, reported the trends over time, and suggested directions for future research. Following the suggestions that Posthuma et al. (2002) postulated, the current study examines data – in real interviews in a real setting – that include outcome variables such as actual job decisions, actual hiring decisions, and actual job performance measures and focus on a non-traditional interview format (the telephone interview).

To contribute to knowledge regarding utility of actual selection techniques, the present study evaluates a behavioral, telephone-interview technique developed by Gallup on a financial sales sample. This paper describes, discusses, and reviews Gallup's development, application, and implementation of its customized, structured interviewing process for selecting salespeople within a financial institution.

LITERATURE REVIEW

Numerous studies have evaluated the selection techniques used for hiring salespeople (Marshall et al. 2002). These efforts have covered everything from employment interviews, assessment centers, IQ tests, previous job experience, integrity testing, references, education, cognitive ability tests, and personality tests (Dipboye 1992; Randall and Randall 1990). Overall, integrity testing, cognitive ability testing, and use of assessment centers appear to be the most effective at predicting job performance (Campion et al. 1994; Howard 1997; Randall 1990; Salgado and Moscoso 2002; Wright et al. 1989). Still, the employment interview remains one of the most popular selection tools (Judge et al. 2000; Posthuma et al. 2002).

The employment interview is intended to provide insight as to a candidate's future performance by evaluating oral responses to the questions presented by the interviewer (McDaniel et al. 1994; Wiesner and Cronshaw 1989). Some scholars question the use of the employment interview as a technique for employee selection because of its low predictive validity (Arvey and Campion 1982; Hunter and Hunter 1984; Reilly and Chao 1982; Schmidt 1976). Still, practitioners continue to use the employment interview as their primary selection tool (Barclay 1999; Judge et al. 2000). Hence, it seems wise to further evaluate the effectiveness of the employment interview as a selection tool. Improvements to the technique could enhance its utility.

Researchers offer the following reasons for the lack of success of data gained through the employment interview in predicting performance in the academic literature:

- Researchers fail to recognize the distinction between job performance criteria collected for research purposes and that employed for administrative purposes;
- Researchers are using the wrong performance components;

- Researchers fail to make adjustments for range restriction, predictor/criterion reliability, and small sample sizes;
- Researchers use global measures of interview performance rather than job, company, and industry-specific measures;
- Researchers fail to incorporate moderators such as interview content, structure, or format in their studies;
- Researchers fail to account for the impact of visual and nonverbal cues on interviewers' judgments.

(Anderson 1995; Avila et al. 1988; Arvey and Campion 1982; Churchill et al. 1985; Eder and Buckley 1988; Eder and Ferris 1989; Grant and Cravens 1996; Harris 1989; Judge et al. 2000; Mayfield 1964; McDaniel et al. 1994; Motowidlo et al. 1992; Oliver and Posthuma et al. 2002; Randall 1990; Salgado and Moscoso 2002)

- Researchers offer the following explanations for practitioners' continued use of employment interviews when academic research has shown other techniques to be better predictors:
- The interview indirectly adds value to the process beyond that of a selection tool in such areas as recruitment and public relations, with the interviewer/recruiter attempting to sell the candidate on the job and the company during the interview.
- Interviews may have a future impact on prospective or current customers when interviewees obtain favorable perceptions of the firm and the fairness of the interview.
- The interview adds value beyond the selection emphasis through its use as a feedback mechanism. The interview offers the opportunity for the candidate to ask specific questions concerning the job and the company that cannot be addressed through other selection methods, such as ability tests.
- Managers believe in the value of the interview and are unwilling to relinquish the use of personal interviews as a selection method even when shown more valid methods of predicting job performance.

- Managers may believe they must meet the candidate in person to prevent any surprises. For example, only through a face-to-face interview can interviewers evaluate the candidate on appearance, social/business interactions, and the ability to "get along" with colleagues.
- Managers may continue to use the interview because of company policies, habits, experience, trust in their own judgments, ease, or the feeling of power. Company policy may dictate that employment interviews be used or firms continue to use employment interviews because selection has always been done that way. In the same context, some managers may continue the process of personal interviews because they were hired that way, and so the next person should be hired that way. Managers may not want to relinquish decision-making power to an impersonal technique such as a pencil and paper test.
- Small organizations may use the employment interview because it is an easy and familiar method to evaluate candidates rather than using more elaborate methods that require special training.
- The employment interview may be a valid predictor of performance that academic researchers have failed to replicate. Recent reviews and meta-analyses have found that an employment interview is a better predictor of performance than previously thought.
- (Arvey and Campion 1982; Campion et al. 1989; Huffcutt and Arthur 1994; Judge et al. 2000; Latham and Sue-Chan 1999; Marchese and Muchinsky 1993; McDaniel et al. 1994; Motowidlo et al. 1992; Posthuma et al. 2002; Orpen 1985; Rynes 1989; Salgado and Moscoso 2002; Schmidt and Hunter 1998)

In their comprehensive meta-analysis of the construct validity of the employment interview, Salgado and Moscoso (2002) concluded that unstructured conventional interviews assessed personality dimensions and social skills while the structured behavioral interview mainly

assessed job knowledge, job experience, and situational judgment. Recent studies of employment interviews have concluded that structured interviews offer greater predictive validity than unstructured interviews (Judge et al. 2000; Ployhart 2006; Barclay 1999). Barclay, in fact, points to the "poor predictive accuracy" (p. 134) of unstructured interviews. "How could interviewers accurately predict future candidate job performance when each maintained his/her own set of favorite questions and asked different questions?" query Harel et al. (2003, p. 94). Furthermore, it appears that the structured interviews can provide incremental validity over other interviewing techniques (Cortina et al. 2000; Huffcutt and Arthur 1994; Huffcutt et al. 2001; McDaniel et al. 2007). Huffcutt, Conway, Roth, and Stone note that degree of structure is the most important factor affecting the interview process (2001, p. 900). A meta-analysis by Schmidt and Zimmerman (2004) indicated that it takes about four unstructured interviews to equal the reliability of one structured interview. The researchers found higher correlations with job performance for structured interviews than for unstructured interviews.

It appears, motivated by recent results found by several researchers of the validity of the structured interview, that more researchers in the academic field are shifting their studies in this area (Van Iddekinge and Raymark 2001; Weekley and Ployhart 2006).

LIFE THEMES INTERVIEW

To evaluate predictive validity of a company selection instrument, the present study used a customized, structured, behavioral-based interview developed by the Gallup Organization. The interview, conducted over the telephone, comprises several items or themes. The model (themes) is customized to suit each firm.

The thesis of the behavioral interview technique studied is life themes, which are spontaneous, recurring patterns of thought, feeling, and behavior (Henkoff 1994). These patterns of

behavior form the basis for theme theory, which allows for prediction of a response to a given situation or set of stimuli. For example, an observer who gets to know a person well enough can anticipate his or her reaction to a given set of circumstances. As Gallup Chairman Donald Clifton states, "Everyone is born with unique characteristics that are reinforced and developed in the first year of life. By the time you reach age 20, your major life themes are pretty well set" (Henkoff 1994, p. 120).

With the Life Themes model, consistency of behavior forms the basis for predictability. Additionally, a theme within a person will recur under a given set of circumstances or situations. Adding the consistent pattern and using an expectation of recurrence, the interviewer can begin to establish a predictable behavior pattern.

The concepts of life theme theory fit within the rubric of the Patterned Behavior Description Interview (PBDI) (see Janz 1982). PBDI serves as the basis for interview models such as life themes. The idea of life theme theory is to understand how applicants handled past situations and decisions so as to extrapolate to expect future situations within the interviewing firm (Janz 1982; Orpen 1985). "The bottom line in selection is prediction of future job performance," write Bowers and Kleiner (2005, p. 107). An example of a behavioral interviewing question is: "Describe a time when you worked in a group and one of the members of the group did not carry his or her weight."

Use of behavior-based interviewing by sales organizations is rising (Barclay 1999). Griffin (1996), director of recruitment at Accenture (formerly Andersen Consulting) indicates that behavior-based interviewing is used by more than 60 percent of Fortune 100 companies and is quite effective in predicting job success.

Several researchers provide evidence that PBDI offers higher levels of predictive validity for selecting employee for specific positions (Campion et al. 1994; Janz 1982; McDaniel et

al. 2007; Orpen 1985; Pulakos and Schmidt 1995; Salgado and Moscoso 2002). Furthermore, interest in the PBDI technique has been seen within academia (Weekley and Ployhart 2006), and some universities have incorporated behavior-based interviewing in their human resources curricula (Starcke 1996). Barclay (2001) notes that "behavioral interviewing has significant benefits in improving selection."

Scholars conduct much interview research in experimental or laboratory settings (e.g., Chapman and Zweig 2005; Iddekinge et al. 2005) that may not generalize to field settings (Posthuma et al. 2002; Harel and Arditi-Vogel 2003), often using college students as subjects in mock interviews rather than real candidates in actual employment interviews. Researchers who conduct interview research in actual field settings are quick to point out the advantages of their studies (e.g., Barclay 1999; Barclay 2001; Moscoso and Salgado 2001; Tsai et al. 2005) over those performed in experimental or laboratory settings. Barclay (1999) goes so far as to state that the "reliance on an experimental approach" (p. 138) is a limitation of existing research. In developing taxonomy of interview constructs, Huffcutt et al. (2001) reviewed only studies that involved interviews for actual positions. While it appears that PBDI offers a promising avenue to predict job performance (Weekley and Gier 1987), the majority of the studies of PBDI have used an experimental design. Little is known about the methodology that practitioners use in the field (Barclay 2001). Harris (1989) Barclay (2001), and Posthuma et al. (2002) stress the importance of studying the methodology and results of PBDI in the field of operations. The current study was designed to evaluate the utility of behavioral interviewing in a sales-force environment.

STUDY DESIGN

A financial institution contracted with Gallup to design an interview to help the organization hire successful loan salespeople (i.e., to increase productivity of new hires and reduce turnover). The loan sales position required a

person to help a customer apply for a loan, counsel customers on loan options, and sell various loan services. A behavioral interviewing technique was used as part of the hiring process applicants underwent.

Gallup used a four-step process to develop the behavioral interview (see also Schmidt and Rader 1999, for a discussion of a variation on this Gallup interview). The four steps are summarized below.

Step 1: Conduct Focus Groups and Work Place Evaluations – Focus groups were conducted with key executives and top-performing salespeople within the sample organization. Focus-group facilitators elicited insights about the sales position by posing such questions as: "Describe your organization's culture?" "What do you like about your job?" "What is your greatest satisfaction?" Answers to the questions provided an understanding of the job demands and expectations. In addition, the analyst spent time with several top salespeople to gain a better understanding of day-to-day activities. Computer-based analysis of the focus-group transcript was conducted using Text Based Alpha software, which identifies words or phrases that allow the analyst to speculate as to the existence of specific life themes.

This process of focus-group interviews and workplace evaluation exemplifies the critical-incident technique developed by Flanagan (1954). Critical incidents are descriptions of effective employee behavior. Through the critical-incident technique, job analysts interview supervisors, job incumbents, and other key observers to determine which behaviors are necessary for success in a particular position (Field and Gatewood 1989). Researchers that have used this technique or variations of it and have proven its success in studies include Carnpion et al. (1994); Carnpion et al. (1988); Janz (1982); Motowidlo et al. (1992); Orpen (1985); Latham and Saari (1984); and Weekley and Gier (1987).

Step 2: Study Group and Contrast Group Research – The second step of the study

involved conducting in-depth interviews with a sample ($n=73$) consisting of the top performing salespeople (study group $n=42$) and salespeople who have average or below-average performance (contrast group $n=31$). The employer chose these groups through a combination of objective and subjective information. Poor performers were assumed to have quit or been fired. Many businesses (e.g., Accenture, FedEx, Hewitt) have concluded that the best way to hire individuals who will succeed within a given organization is to first gain an understanding why some of their people are top performers, while others are mediocre. Underscoring this approach for sales personnel selection is Salz, writing in a 2007 article on the Web site Electronic Recruiting Exchange:

It has always surprised me how many companies have fully documented profiles of their ideal client. Yet, few have a profile of their ideal salesperson. How can you screen when you don't know for what you are screening? ... The lack of a fully defined profile of the ideal salesperson is the most common cause of bad sales marriages.

Data gained through the interviews were analyzed by correlating group membership (study or contrast) to the response to each item on the interview, as well as comparing them to performance data (see Abrahams and Aif 1978; Aif and Abrahams 1975; and Borich and

Godbout 1974, for a discussion of this design). Each question was evaluated in terms of differences between study and contrast groups using a *t* test. Significant correlation for an item to the study group meant that the item and the specific response or listen-for was considered to be a valid question for predicting success. Such items were included in the behavioral interview. Figure 1 summarizes three example life theme questions.

The interviews with the 73 salespeople in the study and contrast groups were scored by incorporating each theme score into a composite score. Each candidate was given an A, B, or C rating, with A being the highest rating. Gallup has discovered that A's usually represent 20-30 percent of the applicant pool. When the firm is hiring a large number of applicants, many times it must dip into the pool of applicants that were grouped as having a lower score. Thus, Gallup uses three groups, which offers the firm another group that scored between the high and low performers, to alleviate the guesswork over which applicants to hire when no more A's are available.

Demographic information was also gathered for each person interviewed to determine whether any systematic differences existed among groups. No significant difference was found among candidates of varying race, gender, or

FIGURE 1
Example of Life Theme, Questions, and Listen-Fors

Life Theme

Ego Drive: Reflected in a person's desire to be highly successful. The need to be a significant person according to his or her own goals.

Question:

"What makes you feel important?"

Listen For:

When I get credit for something or
When I know I've done something.

Question:

"How do you feel when
Someone else gets the credit
for what you've done?"

Listen For:

Bad. Angry.

Question:

Describe a past event that
gave you a great sense of
personal accomplishment.

Listen For:

It was very important for me to be
successful. I am very driven. I
want to be the best. I was recognized for doing a great job.

TABLE 1
Rating of Salespeople

73 Salespeople Interviewed:	38 A-rated
	9 B-rated
	26 C-rated
Average Scores by Group:	A-rated 28.74
	B-rated 24.56
	C-rated 19.31
Scoring Range:	High 40
	Low 8
Correlation of Total Score to Group = .61	

age. Total score on this interview ranged from 0 to 50 points. The results of the interview are summarized in Table 1.

Step 3: Development of Themes/Questions – Life themes and questions were defined on the basis of group membership (groups A, B, C). The final interview consisted of the most predictive questions measuring the dominant themes identified with successful salespeople. Based on the research results, the interview was then reconfigured, and the critical themes defined. The final interview was composed of 50 questions measuring 10 life themes. Five questions corresponded to each life theme. The following themes were developed to represent a successful profile of a loan salesperson for the sampled financial institution:

- **Command:** Readily takes charge of interactions; persuasive.
- **Problem Solver:** Uses competence, logic and experience to reach a successful outcome.
- **Positivity:** Optimistic, sees opportunities rather than obstacles.
- **Ego Drive:** Ability to claim and achieve big goals.
- **Competition:** The need to win; desire to outperform others.
- **Persistence:** Intense and tenacious in work style.

- **Focus:** Goal oriented, single-minded and hard to distract.
- **Responsibility:** Needs to do what is right for the company and the customer.
- **Esteem:** Need to be recognized and rewarded as a professional.
- **Goodwill:** The use of strong interpersonal skills to enhance productivity.

Step 4: Measuring Effectiveness – To evaluate the predictive validity of the behavioral interview, job applicants were interviewed. Telephone interviewers read the 50 questions to the job applicants in the same order and provided no interpretation or clarification. Questions were repeated if necessary, and a candidate could choose to skip the question and come back to it at any time. This structured interviewing process ensured equal treatment for each respondent (see Campion et al. 1997, for thorough description of the benefits of structured interviewing). Several studies have used this method of asking questions when examining the predictive validity of the interview (Campion et al. 1994; Campion et al. 1988; Weekley and Gier 1987).

Following the telephone interview, an audiotape of the interview was given to a trained job analyst to determine if the interviewee's responses matched the desired behavior for the job (the listen-fors in Figure 1). For each response that matched the desired behavior for that question, the candidate received a point. If the response did not match the desired behavior for that question, the response was scored as zero. Results of the interviews were aggregated in the following two ways that enabled the firm to evaluate each candidate:

1. **Total Score by Theme** – This score allowed a manager to see a candidate's areas of strength, as well as his or her weaker areas.
2. **Total Interview Score** – This was an overall rating of the candidate. The candidate was given an A, B, or C rating, where A was high and C was low.

The financial institution had the ultimate decision in the hiring process. The company

TABLE 2
Productivity Outcome Measures

Groups	N	\$ Amount of Loan Mean	Number of Loans Mean	Dollar Goal Mean	Percent Goal Mean	\$ Monthly Avg. Mean
A	73	*11,731,827	99.5	*13,217,057	92.2	*982,789
B	77	9,804,775	92.5	10,603,930	93.9	853,898
C	29	7,486,831	70.9	9,999,511	80.8	658,579

could choose to hire candidates categorized as A's, B's, or C's. Gallup tracked the sales productivity of the individuals hired using the Gallup customized, structured interview to evaluate predictive validity of the technique. Productivity indices included dollar amount of loans, number of loans, dollar goal, percent of goal, and dollar monthly average loan value for the second year the candidate was hired. Retention was represented as an annualized turnover rate that included retention statistics 29 months from date of hire.

RESULTS

The utility of the behavioral model was evaluated in terms of performance and retention of 179 sales job applicants hired under the structured interview. Table 2 summarizes productivity measures of the salespeople by behavioral theme group. As for loan sales, the difference between A-rated candidates and C-rated candidates was statistically significant ($F=3.68$, $df=2,176$; Bonferroni $A>C$, $p<.05$). A-hires had sold 56.7 percent more in loan dollars their second year compared to C-hires.

Difference in the number of loans sold was not statistically significant. However, A-hires accounted for an average of 100 loans in their second year, whereas C-hires accounted for 71. The A-hires accounted for 39.4 percent more loans than the C-hires. Candidates in the A group differed significantly from those in group C based on the productivity measure, average dollar goal for their second year ($F=3.047$, $df=2,176$; Bonferroni $A>C$, $p<.05$).

An analysis of the percentage of goal shows that A-hires had an average of 92 percent, while C's achieved 81 percent of their established goal. The A-hires had a 13.6 percent more loan output when compared to C-hires. The differences were not statistically significant.

Place Table 2 about here

When loan dollar value was divided by LOS (length of service), A-hires had an average of \$982,789 in loans per month compared to \$658,579 for C-hires. The A-hires had 49.2 percent more in loans per month compared to C-hires. The difference between A-hires and C-hires was statistically significant ($F=5.49$, $df=2,176$, Bonferroni $A>C$, $p<.05$).

Overall, the Gallup rating (A, B, C) was significantly predictive of three productivity measures: dollar amount of loans ($r=.20$), dollar goal ($r=.17$) and monthly dollar average ($r=.24$). These results compare quite favorably to the meta-analytic validity findings of the structured employment interview (Huffcutt and Arthur 1994; McDaniel et al. 1994; Salgado and Moscoso 2002; Schmidt and Rader 1999).

Another objective for developing the customized, structured interview was to increase salesperson retention. The financial institution reported that the turnover rate for loan salespeople was 38.7 percent for the year prior to enactment of the technique. As shown in Table 3, annualized turnover for the 29 months following the first hire was 13.6 percent. By classification, A-hires had a 17 percent annualized turnover compared to 10.8 percent for B-hires and 12.9 percent for C-

hires. Overall, after implementing the structured interview, annualized turnover decreased from 38.7 percent to 13.55 percent (assuming all else held constant). The annualized turnover rate included anyone who left the firm whether for promotion, transfer, personal reasons, or poor productivity.

However when turnover was further scrutinized according to poor productivity dismissals, six of the 19 C-hires and 10 of the 66 A-hires were dismissed because of poor productivity. By percentage of terminations, C-hires (31.5 percent) are twice as likely to terminate because of performance as are A-hires (15.2 percent). On average, A-terminations stay about 12.3 months before leaving, compared to 8.8 months for B-terminations and 10.6 months for C-terminations. As Richardson (1999) stated, it is important to classify the types of turnover when assessing the opportunity costs associated with the sales lost.

DISCUSSION

The study offers four advantages to those interested in practices involved in hiring sales representatives: (a) Real behavioral interview data were used to classify new hires; (b) post-hire performance data were used to evaluate performance and retention of applicants from each behavioral group; (c) proprietary information regarding development of behavioral interviewing techniques was shared; and (d) several performance measures, multiple indicators, were used.

Study findings suggest that applicants that scored higher in the behavioral interview performed better and were less likely to leave the company for poor productivity, thus contributing to the literature on the predictive validity of PBDI. However, it should be noted that organizations can exert a significant impact on the success of their employees. The financial institution described in this paper had the final decision in determining whom they hired: As, Bs or Cs. If a manager had a good feeling about a C, the manager had the authority to hire that person. Once the person was hired, the manager could use the results of the interview to better understand the strengths and weaknesses of the individual hired and how he or she needed to be managed. Thus, the results of the interview may have influenced the manager in several ways: (a) Managers may have assigned the best territories to A hires and given the worst territories to C hires; (b) managers may have given more training to the C hires; and (c) managers may have assigned C hires to the sales managers who provided the most support. Thus, the use of outcomes (i.e., sales volume) to evaluate the success of a selection technique to predict performance measures may be flawed (Randall and Randall 1990). Future research should include both behaviors and outcomes in their study or/and adjust performance for sales territory, sales manager, and training differences.

CONCLUSION

Much more research is needed into the many aspects of the employment interview. A thorough literature search shows that behavior-

TABLE 3
Annualized Turnover for Candidates Hired Under Life Themes

Groups	Hired	Active	Terminated	Annualized Turnover Percent
A	161	95	66	16.96
B	169	125	44	10.77
C	64	45	19	12.88
TOTAL	394	265	129	13.55 (Average)

based interviewing techniques have been inadequately researched, as has been the predictive validity of interviews regarding retention of employees. When meta-analyses have been conducted, behavior-based interviewing techniques have not been treated as a separate category since there has been few studies in this area (McDaniel et al. 1994). This lack of research proves worrisome since many practitioners are selecting the method. We hope the results of this study and others on job-related interviewing provide an impetus to study additional practitioner methods that are structured and job related.

As the current study shows, the customized, structured, job-related interviewing process developed by the Gallup Organization can be an effective tool to assist in selecting and managing successful and satisfied salespeople by predicting productivity and retention and identifying strengths and weaknesses of new hires. In the applied realm of actual recruiters interviewing sales candidates, Salz (2007) calls behavioral interviewing a "powerful tool". Similarly, Warech's study (2002) of the application of a competency-based, structured-interview process to hire sales specialists at Buckhead Beef not only provides further evidence of the predictive validity of structured interviews that were partially behavioral, but also presents an interesting comparison with the present study. Furthermore, this study's technique was delivered by telephone, which can offer substantial savings in both time and costs, although a non-traditional format interview such as the telephone interview may have a negative impact on the applicants. Future research should measure the impact of non-traditional interviews (e.g., telephone, video interactive interviews, and Internet interactive interviews) on the interview, on acceptance rates, and on the applicant reactions to fairness and feeling toward the interviewing firm.

REFERENCES

- Abrahams, N. M. and E. F. Aif, Jr. (1978), "Relative Costs and Statistical Power in the Extreme Groups Approach", *Psychometrika*, 43(1), 11-17.
- Aif, E. F., Jr. and N. M. Abrahams (1975), "The Use of Extreme Groups in Assessing Relationships", *Psychometrika*, 40(4), 563-572.
- Adidam, P. T. (2006), "Causes and Consequences of High Turnover by Sales Professionals", *Journal of American Academy of Business*, 10(1), 137-141.
- Avila, R. A., E. F. Fern and O. K. Mann, (1988), "Unraveling Criteria for Assessing the Performance of Salespeople: A Casual Analysis", *Journal of Personal Selling and Sales Management*, 8, 45-54.
- Arvey, R. D. and J. E. Campion (1982), "The Employment Interview: A Summary and Review of Recent Research", *Personnel Psychology*, 35, 281-323.
- Barclay, J. M. (1999), "Employee Selection: A Question of Structure", *Personnel Review*, 28(1/2), 134-151.
- Barclay, J. M. (2001), "Improving Selection Interviews with Structure: Organisations' Use of Behavioral Interviews", *Personnel Review*, 30(1), 81-101.
- Borich, G. D. and R. G. Godbout (1974), "Extreme Groups Designs and the Calculation of Statistical Power", *Educational and Psychological Measurement*, 34, 663-675.
- Bosshardt, M. J. (1992), "Situational Interviews Versus Behavior Description Interviews: A Comparative Validity Study", *Unpublished Doctoral Dissertation*, University of Minnesota.
- Bowers, D. and B. H. Kleiner (2005), "Behavioral Interviewing", *Management Research News*, 28, (11/12), 107-114.
- Campbell, J. P. (1990), "Modeling the Performance Prediction Problem in Industrial and Organizational Psychology", in M. D. Dunnette, and L. Hough (Eds.), *Handbook of Industrial and Organizational Psychology*, Vol. 2, 687-732. Palo Alto, CA: Consulting Psychologists Press.

- Campion, M. A., J. E. Campion and J. P. Hudson, Jr. (1994), "Structured Interviewing: A Note on Incremental Validity and Alternative Question Types", *Journal of Applied Psychology*, 79(6), 998-1002.
- Campion, M. A., D. K. Palmer and J. E. Campion (1997), "A Review of Structure in the Selection Interview", *Personnel Psychology*, 50(3), 655-702.
- Campion, M. A., E. D. Pursell and B. K. Brown (1988), "Structured Interviewing: Raising the Psychometric Properties of the Employment Interview", *Personnel Psychology*, 41, 25-42.
- Chapman, D. S. and D. I. Zweig (2005), "Developing a Nomological Network for Interview Structure: Antecedents and Consequences of the Structured Selection Interview", *Personnel Psychology*, 58(3), 673-702.
- Chonko, L. B., T. N. Loe, J. A. Roberts and J. F. Tanner (2000), "Sales Performance: Timing of Measurement and Type of Measurement Make a Difference", *Journal of Personal Selling and Sales Management*, 20, 23-36.
- Churchill, G.A., Jr., N. M. Ford, S. W. Hartley and O. C. Walker, Jr. (1985), "The Determinants of Salesperson and Performance: A Meta-Analysis", *Journal of Marketing Research*, 23, 103-118.
- Cleaf, M. S. V. (1991), "In Search of Competence: Structured Behavior Interviews", *Business Horizons*, 51-55.
- Darmon, R. Y. (2004), "Controlling Sales Force Turnover Costs Through Optimal Recruiting and Training Policies", *European Journal of Operational Research*, 154(1), 291.
- Dipboye, R. L. (1992), "Selection Interview: Process Perspectives", Cincinnati, OH: Southwestern.
- Dreher, G. F. and S. D. Maurer (1989), "Assessing the Employment Interview: Deficiencies Associated with the Existing Domain", In R. W. Eder, and G. R. Ferris (Eds.), *The Employment Interview: Theory, Research, and Practice* (pp.249-268). Newbury Park, CA: Sage Publications, Inc.
- Eder, R. W. and M. R. Buckley (1988), "The Employment Interview: An Interactionist Perspective", In G. R. Ferris, and K. M. Rowland (Eds.), *Research in Personnel and Human Resources Management*. Vol. 6, 75-107. Greenwich, CT: JAI Press.
- Eder, R. W. and G. R. Ferris (1989), *The Employment Interview: Theory, Research, and Practice*, Newbury Park, CA: Sage Publications, Inc.
- Field, H. S. and R. D. Gatewood (1989), "Development of a Selection Interview: A Job Content Strategy", In R. W. Eder, and G. R. Ferris (Eds.), *The Employment Interview: Theory, Research, and Practice*, 145-157. Newbury Park, CA: Sage Publications, Inc.
- Flanagan, J. C. (1954), "The Critical Incident Technique", *Psychological Bulletin*, 51, 327-358.
- Grant, K. and D. W. Cravens (1996), "Examining Sales Force Performance in Organizations that Use Behavior-Based Sales Management Processes", *Industrial Marketing Management*, 22, 361-371.
- Gordon, J. and B. Lowe (2002), "Employee Retention: Approaches for Achieving Performance Objectives", *Journal of American Academy of Business*, 1(2), 201.
- Griffin, N. (1996), "Andersen Consulting: Critical Behavior Interviewing Workshop", Online Posting. Newsgroup. Retrieved [date], from <http://careerweb.georgetown.edu/promos/anderson.html>. November 17, 1996.
- Harel, G., A. Arditi-Vogel and T. Janz (2003), "Comparing the Validity and Utility of Behavior Description Interview Versus Assessment Center Ratings", *Journal of Managerial Psychology*, 18(1/2), 94-104.
- Harris, M. M. (1989), "Reconsidering the Employment Interview: A Review of Recent Literature and Suggestions for Future Research", *Personnel Psychology*, 42, 691-726.
- Head, R. G. (1992, February), "Systematizing Salesperson Selection", *Sales and Marketing Management*, 65-68.
- Henkoff, R. (1994, October 3), "Finding, Training and Keeping the Best Service Workers", *Fortune*, 110-122.

- Howard, A. (1997), "A Reassessment of Assessment Centers: Challenges for the 21st Century", *Journal of Social Behavior and Personality*, 12, 13-53.
- Huffcutt, A. I. and W. Arthur, Jr. (1994), "Hunter and Hunter (1984) Revisited: Interview Validity for Entry-Level Jobs", *Journal of Applied Psychology*, 79(2), 184-190.
- Huffcutt, A. I., P. L. Roth, J. M. Conway and N. J. Stone (2001), "Identification and Meta-Analytic Assessment of Psychological Constructs Measured in Employment Interviews", *Journal of Applied Psychology*, 86(5), 897-913.
- Hunter, J. E. and R. F. Hunter (1984), "The Validity and Utility of Alternative Predictors of Job Performance", *Psychological Bulletin*, 96, 72-98.
- Janz, T. (1982), "Initial Comparisons of Patterned Behavior Description Interviews Versus Unstructured Interviews", *Journal of Applied Psychology*, 67(5), 577-580.
- Judge, T. A., C. A. Higgins and D. M. Cable (2000), "The Employment Interview: A Review of Recent Research and Recommendations for Future Research," *Human Resource Management Review*, 10(4), 383-406.
- Latham, G. P. and L. M. Saari (1984), "Do People Do What They Say?, Further Studies on the Situational Interview", *Journal of Applied Psychology*, 69, 569-573.
- Marshall, G. W., T. H. Stone and I. M. Jawahar (2001), "Selection Decision Making by Sales Managers and Human Resource Managers: Decision Impact, Decision Frame and Time of Valuation", *Journal of Personal Selling and Sales Management*, 21(1), 19-28.
- Mayfield, E. C. (1964), "The Selection Interview: A Reevaluation of Published Research", *Personnel Psychology*, 17, 239-260.
- McDaniel, M. A., N. S. Hartman, D. L. Whetzel and W. L. Grubb III (2007), "Situational Judgment Tests, Response Instructions, and Validity: A Meta-Analysis", *Personnel Psychology*, 60, 63-91.
- McDaniel, M. A., D. L. Whetzel, F. L. Schmidt and S. D. Maurer (1994), "The Validity of Employment Interviews: A Comprehensive Review and Meta-Analysis", *Journal of Applied Psychology*, 79(4), 599-616.
- Moscato, S. and J. F. Salgado (2001), "Psychometric Properties of a Structured Behavioral Interview to Hire Private Security Personnel", *Journal of Business and Psychology*, 16(1), 51-59.
- Motowidlo, S. J., G. W. Carter, M. D. Dunnette, N. Tippins, S. Werner, J. R. Burnett and M. J. Vaughan (1992), "Studies of the Structured Behavioral Interview", *Journal of Applied Psychology*, 77(5), 571-587.
- Munasinghe, L. and B. O'Flaherty (2005), "Specific Training Sometimes Cuts Wages and Always Cuts Turnover", *Journal of Labor Economics*, 23(2), 213.
- Orpen, C. (1985), "Patterned Behavior Description Interviews Versus Unstructured Interviews: A Comparative Validity Study", *Journal of Applied Psychology*, 70, 774-776.
- Ployhart, R. E. (2006), "Staffing in the 21st Century: New Challenges and Strategic Opportunities", *Journal of Management*, 32, 868-987.
- Posthuma, R. A., F. P. Morgeson and M. A. Campion (2002), "Beyond Employment Interview Validity: A Comprehensive Narrative Review of Recent Research and Trends Over Time", *Personnel Psychology*, 55, 1-81.
- Randall, E. J. and C. H. Randall (1990), "Review of Salesperson Selection Techniques and Criteria", *International Journal of Research in Marketing*, 7(2, 3), 81-95.
- Randall, E. J. (1990), "Selecting that Successful Salesperson", *Review of Business*, 12(1), 19-24.
- Reilly, R. R. and G. T. Chao (1982), "Validity and Fairness of Some Alternative Employee Selection Procedures", *Personnel Psychology*, 35, 1-62.

- Rhoads, G. K., J. Singh and P. Goodell (1994), "The Multiple Dimensions of Role Ambiguity and their Impact upon Psychological and Behavioral Outcomes of Industrial Salespeople", *Journal of Personal Selling and Sales Management*, 14(2), 1-24.
- Rynes, S. L. (1989), "The Employment Interview as a Recruitment Device", In R.W. Eder and G. R. Ferris (Eds.), *The Employment Interview: Theory, Research, and Practice* (pp. 127-138). Newbury Park, CA: Sage Publications, Inc.
- Salgado, J. F. and S. Moscoso (2002), "Comprehensive Meta-Analysis of the Construct Validity of the Employment Interview", *European Journal of Work and Organizational Psychology*, 11(3), 299-324.
- Salz, L. (2007, November 27), "Why Can't I Hire the Right Salespeople? Electronic Recruiting Exchange", Retrieved November 28, 2007, from <http://www.ere.net/articles/db/B70D55ACB7264711A4BF613E99BB737F.asp>
- Schmidt, N. (1976), "Social and Situational Determinants of Interview Decisions: Implications for the Employment Interview", *Personnel Psychology*, 29, 79-101.
- Schmidt, F. L. and J. E. Hunter (1998), "The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 years of Research Findings", *Psychological Bulletin*, 124, 262-274.
- Schmidt, F. L. and J. E. Hunter (1999), "Theory Testing and Measurement Error", *Intelligence*, 27, 183-198.
- Schmidt, F. L. and M. Rader (1999), "Exploring the Boundary Conditions for Interview Validity: Meta-Analytic Validity Findings for a New Interview Type", *Personnel Psychology*, 52(2), 445-465.
- Schmidt, F. L. and R. D. Zimmerman (2004), "A Counterintuitive Hypothesis about Employment Interview Validity and some Supporting Evidence", *Journal of Applied Psychology*, 89(3), 553-561.
- Starcke, A. M. (1996), "Tailor Interviews to Predict Performance", *HR Magazine*, 49-54.
- Tsai, W., C. Chen and S. Chiu (2005), "Exploring Boundaries and Effects of Applicant Impression Management Tactics in Job Interviews", *Journal of Management*, 31, 108-125.
- Van Iddekinge, C. H. and P. H. Raymark (2001), "What do Structured Employment Interviews Measure? Examining the Construct Validity of a Behavior Description Interview", *Academy of Management Proceedings*, HR F2-HR F6.
- Van Iddekinge, C. H., P. H. Raymark and P. L. Roth (2005), "Assessing Personality with a Structured Employment Interview: Construct-Related Validity and Susceptibility to Response Inflation", *Journal of Applied Psychology*, 90(3), 536-552.
- Warech, M. A. (2002), "Competency-Based Structured Interviewing: At the Buckhead Beef Company", *Cornell Hotel and Restaurant Administration Quarterly*, 43, 70-77.
- Weekley, J. and J. A. Gier (1987), "Reliability and Validity of the Situational Interview for a Sales Person", *Journal of Applied Psychology*, 72, 484-487.
- Weekley, J. A. and R. E. Ployhart (2006), *Situational Judgment Tests: Theory, Management, and Application*. Mahwah, NJ: Erlbaum.
- Wiesner, W. H. and S. F. Cronshaw (1988), "A Meta-Analytic Investigation of the Impact of Interview Format and Degree of Structure on the Validity of the Employment Interview", *Journal of Occupational Psychology*, 61, 275-290.
- Wright, P. M., P. A. Lichtenfels and E. D. Pursell (1989), "The Structured Interview: Additional Studies and a Meta-Analysis", *Journal of Occupational Psychology*, 62, 191-199.