

# SASMA Portal 2010

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## Predictive validity of Midot's test under the academic supervision of Derby University - Itai Horowitz

MIDOT

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### Theoretical

### Background

One of the main challenges in the modern industrial world is to predict employees' behaviors. Typically, the manager is responsible for assessing which applicants are right for a certain job. A good assessment can be a complex process including an evaluation of personality, abilities, experience, education and various skills and individual aspects, in addition to the formal job requirements.

Integrity tests have been in commercial use for decades (since the mid 50's), but the use of these tests as a primary tool in the early stage of applicant selection, for a variety of jobs, increased substantially in the early 90's. In recent years, a number of studies have been conducted regarding the question of whether a psychological construct for integrity exists and if so, whether such a construct can be measured. If integrity is determined by a person's individual characteristics, integrity tests measuring these characteristics may assist substantially in predicting negative behavior in the workplace.

Common integrity tests can be divided into two groups: Overt tests, which contain direct questions about dishonest behavior, such as "have you ever stolen from an employer?" and tests that can be described as implicit or "personality based", which try to assess integrity based on answers to questions that are not visibly or noticeably related to integrity.

Predictive validity of a selection system is an issue that concerns all of the entities involved with such systems, from the organization that uses the system, through the applicants and the professional team that performs the selection. A simple central idea is at the base of the validity concept is the degree of correlation between the scores achieved in selection tests and achievements in the field.

### Objective:

To examine the predictive validity of the Midot test by examining the relationship between the applicants' scores on the test and their integrity on the job.

### Hypotheses:

1. There will be a positive relationship between successful Midot test scores and non-involvement in occupational offenses, as evaluated by periodical polygraph tests.
2. The lower the score received in the Midot test, the greater the chance of the employee being involved in occupational offenses.

### **Method:**

The study used a correlative, quantitative approach.

**Independent variable:** score received in the Midot Integrity test during preemployment selection stage (predictor).

**Dependent variable:** Employee integrity as measured by polygraph examinations (criterion)

**Tools:** Midot test (at the pre-employment stage) and the polygraph test (6-18 months after employment).

**Participants:** all employees who met the following requirements were included in this study: had taken the Midot test prior to being hired; accumulated 6-18 months of employment in the organization; held positions in retail and distribution organizations. The total population was of about 1000 subjects. 158 employees, from a number of different organizations, were randomly sampled from the total sample pool, from which 68 subjects (43.0%) passed Midot test prior to being hired and 90 subjects (57%) were not administered the test at the selection stage.

### **Findings:**

**There was a positive relationship between an applicant's success in the Midot test and non-involvement in occupational offenses, as tested by a periodical polygraph test.**

The hypothesis was examined by a chi square test, and the findings are displayed in table 1.

Table 1: Midot and periodical polygraph results

The findings displayed in table 1 indicate a significant relationship between the variables ( $\chi^2(1)=4.30$ ,  $p<.05$ )

**Among subjects who took the Midot test and successfully passed, 92.6% also successfully passed the Polygraph test, and only 7.4% were found to be involved in committing occupational offenses.**

On the other hand, among subjects who did not take Midot test prior to being hired, 18.9% were found to be involved in occupational offenses.

Based on this, it may be concluded that among employees who took and successfully passed the Midot test prior to being hired, a lower rate of occupational offenses existed as defined by failing the periodical Polygraph test, supporting the hypothesis.

**2. The second hypothesis of the study: Subjects who received a “Recommended” score are less involved in occupational offenses compared to those who received a “Marginal” score.**

The final score in the test is divided into 3 levels: “Recommended”, “Marginal” and “Not Recommended”. The “Not Recommended” applicants were not hired here, so there are no Polygraph results for them (restriction of range). Nevertheless, it is interesting to compare the people who received “Recommended” scores to the people who received “Marginal” scores.

Table 2 sums up these differences:

Table 2: Examining the differences between “Recommended” and “Marginal” results and success in a periodical Polygraph test

As shown, among subjects that scored “Recommended” in the test, only 3.5% were found to be involved in occupational offenses in the Polygraph test, as opposed to 27.3% of the subjects that scored “Marginal” in the test. The differences are significant  $\chi^2(1)=7.844$ ;  $p<0.01$

**Conclusions:**

It may be concluded from the findings that the Midot test can positively contribute to the screening of unreliable applicants and thus has the potential to raise the level of employee occupational integrity. These conclusions are based on the confirmed hypothesis of a positive relationship between Midot test scores and occupational offenses. It was also found that non-tested employees were 2.6 times more likely to be involved in occupational offenses as measured by polygraph examinations than those who had been pre-screened by Midot.

A limitation to this study relates to the restriction of the range (whereby applicants who were screened out by the test were not hired, and so it was not possible to estimate their percentage involvement in occupational offenses).

Finally, the findings of this study support the large amount of empirical evidence reported in recent years as to the significant validity of integrity testing in predicting counterproductive work behaviors.

## **Itai Horowitz**

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