

PREDICTIVE BEHAVIOR PROFILE™

*Development & Validation Guide For
Employee Productivity & Safety*

The Predictive Behavior Profile study was conducted and validated with methods consistent with generally accepted professional standards such as those described in the Standards for Educational and Psychological Tests, and the Uniform Guidelines on Employee Selection Procedures (1978) adopted by the Equal Employment Opportunity Commission, the Department of Labor, the Department of Justice, and the Civil Service Commission.

EXEMPLAR®
RESEARCH GROUP

PREDICTIVE BEHAVIOR PROFILE™

Validation Study Executive Summary

Exemplar Research Group conducted a validation study which found that personality traits have a significant impact on job performance, accidents, workers compensation claims, time off the job, and driving behavior.

This report will explain how the Predictive Behavior Profile test can help companies reduce costs related to hiring the wrong employee while increasing profitability, productivity per employee, and ease of management of all future hires.

EXEMPLAR RESEARCH GROUP:

- Created personality inventory based on the Big Five Model of Personality.
- The inventory (subsequently named the “Predictive Behavior Profile”) comprised 12 different scales and encompassed 146 items.
- Participating companies were asked to provide:
- Their supervisors’ ratings of employees on 12 different dimensions that management had deemed important for job and company success.
- Data from the previous two years’ personnel records including incidents of tardiness and absenteeism, worker’s compensation claims, and time off the job due to worker’s compensation.
- We also secured permission from each research study participant to obtain their State motor vehicle records.

THE RESULTS INDICATED THAT THERE ARE STRONG CORRELATIONS BETWEEN INDIVIDUAL PERSONALITY DIMENSIONS AND:

- Ratings on performance evaluations.
- Worker’s compensation claims.
- A variety of on-the job behaviors.
- Disciplinary actions.
- Driving behavior.

THE PRACTICAL APPLICATIONS OF USING THIS TOOL FOR COMPANIES LIKE YOURS INCLUDE:

- The odds of hiring the best employees can be greatly improved by using this test in your hiring process.
- Direct workforce management costs like training and turnover can be reduced.
- Indirect costs like worker’s compensation claims, time lost on the job, accidents, and low productivity can also be reduced.

METHOD & PREDICTORS

The subjects of this study were entry level workers employed by a diverse group of companies who were tested on a variety of personality traits comprising our personality inventory.

The research tool was based on the Big Five Model of Personality. We also chose additional relevant dimensions that have been shown to be good predictors of job performance in prior research. The final inventory (subsequently named the “Predictive Behavior Profile”) comprised 12 different scales and encompassed 146 items.

BELOW ARE SUMMARIES OF EACH OF THE 12 SCALES:

AGREEABLENESS

High scorers on Agreeableness tend to be cooperative, tolerant, pleasant, slow to anger, generous, while low scorers are more self-centered, argumentative, intolerant, and unhelpful to others.

ALCOHOL ATTITUDES

High scores on this scale reflect greater use of alcohol and more accepting attitudes toward alcohol use. Low scores reflect people who rarely, if ever, use alcohol.

COMPANY LOYALTY

High scorers have positive, accepting, tolerant attitudes toward their company and those in management positions. Low scorers tend to be angry, fatalistic, suspicious, and pessimistic toward their company. Low scorers usually admit to complaining about their company.

CONSCIENTIOUSNESS

Conscientiousness is one of the key dimensions in the Big Five Model of Personality. It measures conformance with societal norms, reliability, responsibility, adherence to societal / company rules and regulations. Low scorers are more likely to flout the rules, behave in self-serving ways, and be undependable.

DRUG USE ATTITUDES

High scores on this scale reflect greater use of illegal drugs and more accepting attitudes toward those substances. Low scores reflect negative attitudes toward drug use and a disinclination to taking illegal drugs.

EMOTIONAL STABILITY

Emotional Stability is one of the key dimensions in the Big Five Model of Personality. It pertains to being mature, level-headed, and calm during crises. Low scorers are more likely to be moody, easily irritated, anxious, and more reactive to life stress.

HEALTH-MINDEDNESS

Health Mindedness is designed to tap into an individual's concern about proper diet, exercise, and being responsible about following physician's recommendations for maintaining optimal health. Low scorers reflect lackadaisical attitudes about activities that promote health and lack of concern about current health status.

INITIATIVE

Initiative measures employees' time management and effort expended on the job. Low scorers are more likely to do minimal work, only doing what is required or what they can get away with.

INTEGRITY

This scale measures pro-social, ethical values, honesty, rule-following behavior, and adherence to societal norms for "good" conduct. Low scorers reflect greater likelihood of engaging in antisocial and delinquent acts on the job (e.g., theft, pilferage, sabotage, embezzlement, larceny, misrepresentation, falsification of information, cheating, etc.), whereas high scores reflect a respect for ethical choices.

OPTIMISM

The Optimism scale assesses whether a person has an optimistic, hopeful outlook concerning situations, people, prospects, and the future, even in the face of difficulty and adversity. It also includes a tendency to minimize problems and persist in the face of setbacks. People high on this dimension tend to be upbeat and have positive expectations for themselves, their work, the people they work with, and their employer. People scoring low on this dimension tend to be negative, pessimistic, skeptical, fault-finding, critical, and judgmental.

RISK-TAKING

Risk-taking is designed to predict whether people enjoy taking risks, enjoy the thrill of putting themselves in danger. Low scorers steer clear of risks because they prefer predictability and safety; high scorers actively seek and engage in risky behaviors.

SAFETY-MINDEDNESS

The Safety-Mindedness scale assesses a person's concern for safety in the workplace and determines whether they behave in ways to create a safe working environment, free from accidents, risks, and threats to the health of employees.

CRITERION VARIABLES

FIRST, Participating companies were asked to provide their supervisors' ratings of employees on 12 different dimensions that management had deemed important for job and company success.

- Problem Solving Ability
- Openness to New Learning
- Work Ethic
- Dependability
- Integrity
- Quality-Mindedness
- Safety-Mindedness
- Team-Mindedness
- Relationships with Co-workers
- Relationships with Managers
- Attitudes toward the Company
- Opinion of Overall Job Performance

RATING SCALE	
1	Low
2	Below Average
3	Acceptable
4	Above Average
5	Exceptional

Supervisors were asked to rate employees on these 12 dimensions expressly for this research study. They were informed that no one apart from the primary researcher would ever see an individual's ratings.

SECOND, participating companies were also asked to provide data from the previous two years' personnel records on:

- Unexcused absences
- Tardiness
- Worker's compensation claims – medical only
- Worker's compensation claims – time off
- On-the-job accidents with company vehicle
- On-the-job accidents with company equipment
- Verbal disciplinary actions
- Written disciplinary actions

THIRD, state motor vehicle records were obtained for all research participants.

Data from the past five years were categorized as:

- Number of speeding tickets
- Number of tickets for various driving rules infractions
- Number of accidents where the driver was at fault
- Number of accidents where the driver was not at fault
- Number of DUIs

ADVERSE IMPACT ANALYSIS FOR EXEMPLAR RESEARCH GROUP

The following analysis demonstrates that there is no evidence of adverse impact in Exemplar's Predictive Behavior Profile hiring report. The Predictive Behavior Profile reports produce six scores and three recommendations:

- Company Success a recommendation which is a composite rating of the following scores:
- People Relationships
- Work Ethic
- Conscientiousness
- Workers Compensation, a recommendation
- Driving Safety, a recommendation

These analyses were done on a validation sample of current employees, so it would be inappropriate to define our groups as "hired" versus "rejected." However, when the resulting test is used by companies in their hiring process, the reports suggest that a score falling in the "Red Flag" zone gives cause to use caution if you consider hiring the candidate. So, in this set of Adverse Impact analyses, the Selection Ratio is defined as percent falling in the yellow and green zones, i.e., people who might have been hired.

FOR THE EXEMPLAR REPORTS, THE "RED FLAG" ZONE FOR:

- Company Success is set to comprise 20% of the population.
- For Workers Compensation it is set at 15%.
- For Driving Safety it is set at 15%
- If any candidate scores in the bottom 10% in any of the hybrid dimensions: People, Work Ethic, and Conscientiousness, they are "Red Flagged" as well

In this study, we will use the 4/5s rule to evaluate whether there is Adverse Impact, i.e., adverse impact is judged to be present if the selection ratio (chance of being hired) of the minority group was less than 80% of the hiring ratio of the majority group.

In the following tables, we show three types of results: those for Whites vs. other minorities, males vs. females, and younger (< 40 years old) vs. older (40 years old and above). No evidence of adverse impact was found in any of the analyses.

ADVERSE IMPACT MEASUREMENTS			MINORITY SELECTION RATIO AS A PERCENT OF MAJORITY SELECTION RATIO	EVIDENCE OF ADVERSE IMPACT?
RACIAL IMPACT	WHITE MAJORITY	RACIAL MINORITIES		
Company Success	.80	.77	$.77 / .80 = .96$	No
People Relations	.90	.87	$.87 / .90 = .96$	No
Work Ethic	.90	.90	$.90 / .90 = 1.00$	No
Conscientiousness	.91	.87	$.87 / .91 = .96$	No
Workers Comp	.86	.77	$.77 / .86 = .89$	No
Driving Risk	.85	.70	$.70 / .85 = .82$	No
GENDER IMPACT	MALES	FEMALES		
Company Success	.80	.77	$.77 / .80 = .96$	No
People Relations	.89	.93	$.93 / .89 = 1.04$	No
Work Ethic	.90	.87	$.87 / .90 = .97$	No
Conscientiousness	.91	.84	$.84 / .91 = .92$	No
Workers Comp	.83	.93	$.93 / .83 = 1.12$	No
Driving Risk	.84	.93	$.93 / .84 = 1.11$	No
AGE IMPACT	UNDER 40	OVER 40		
Company Success	.77	.83	$.77 / .83 = 1.07$	No
People Relations	.88	.91	$.91 / .88 = 1.03$	No
Work Ethic	.86	.94	$.94 / .86 = 1.09$	No
Conscientiousness	.91	.91	$.91 / .91 = 1.00$	No
Workers Comp	.80	.89	$.89 / .80 = 1.05$	No
Driving Risk	.84	.86	$.86 / .84 = 1.11$	No

CONCLUSION

In summary, this study was very successful in terms of demonstrating significant relationships between personality variables and behaviors on the job. These results demonstrate solid empirical evidence that personality variables can be used for employee selection purposes with confidence that choosing those people with desirable scores will result in a workforce with better overall job performance, good interpersonal relationships, safety-mindedness, work quality, work ethic.

Similarly, where people use company vehicles in their jobs, using personality predictors can help companies hire those people who will obey the law, strive to drive in a safe law-abiding manner, and use good judgment to avoid accidents.

This study demonstrates the validity of the “Predictive Behavior Profile” and does not discriminate against candidates based on protective EEOC classifications; race, creed, age, or sex¹.

THE PRACTICAL APPLICATIONS OF USING THIS TOOL FOR A COMPANY LIKE YOURS INCLUDES:

- The odds of hiring the best employees can be greatly improved.
- Direct hiring costs like training and turnover can be reduced.
- Indirect costs like worker’s compensation claims, time lost, accidents and low productivity can also be reduced.
- The “Predictive Behavior Profile” is cost-effective to administer and can be seamlessly integrated into the hiring process.

Exemplar Research Group’s Predictive Behavior Profile is a validated personality assessment test and a good predictor of safety and job performance.

¹ Hogan, R. (1996). *Personality assessment*. In R. S. Barrett (Ed.), *Fair employment strategies in human resources management* (pp. 144-152). Westport, Connecticut: Quorum.

Hogan, R., Hogan, J. & Roberts, B. W. (1996). *Personality measurement employment decisions (Questions and answers)*. *American Psychologist*, 51, 469-477.

INDUSTRIAL PSYCHOLOGISTS BEHIND EXEMPLAR RESEARCH GROUP



MATTHEW YEE CIC, CRM

Matthew Yee is President of Exemplar Research Group, LLC and co-developer of the Predictive Behavior Profile test. Matthew has over 23 years experience as a commercial insurance risk manager.

Matthew's intuition and vision of what drives automobile and workers compensation claims was the genesis behind Exemplar Research Group, LLC. The result is the Predictive Behavior Profile, a test designed specifically for the insurance industry that uses proven psychological dimensions, scoring and algorithms to help predict losses due to employee behavior and performance.



DR. GIBSON, PH.D.

Dr. Gibson is a Licensed Industrial/Organizational Psychologist who has many years of experience in the areas of test development, test validation, and implementation of selection testing programs. In addition to helping publish many scholarly research articles, she has taught research methods, statistics, program evaluation and human resource management at both the University of Tennessee and Tusculum College. Dr. Gibson's work is focused on selection test development, validation of selection testing programs, and working with client companies to tailor employee selection testing to their needs. Some of her clients include AK Steel, Brad Worthley International, City of Knoxville, Culpepper and Associates Security Services, Exemplar, Denso-TN, Exedy America, Gerdau Ameristeel, Harbor Retirement Associates, Monster.com, Sumitomo Electric Wiring Systems, among others.

In loving memory of Dr. Lucy Gibson, PH.D. - August 2015

INDUSTRIAL PSYCHOLOGISTS BEHIND EXEMPLAR RESEARCH GROUP



JOHN LOUNSBURY, PH.D.

Professor Emeritus in the Department of Psychology at the University of Tennessee, Dr. Lounsbury is a Fellow of the American Psychological Association and a licensed Industrial/Organizational Psychologist. Dr. Lounsbury teaches a number of courses on testing, research methods, psychometrics, and human resources management. He has chaired over 100 doctoral dissertations and authored over 100 scholarly articles in peer-reviewed journals; plus, he has consulted on a wide variety of topics and issues with companies, including Time-Warner, Levi Strauss, U.S. Department of Energy, Monster.com, Arvin North American, Pilot Corporation, eCareerFit, Daikin Drivetrain, Arvin North American Automotive, and 7-Eleven Corporation. His consulting activities revolve primarily around test development and personality predictors in the workplace.

*Contact Exemplar Research Group, LLC
to review the exhaustive validation study. You must schedule an appointment
and complete a non-disclosure/confidentiality agreement.*