Usage of Psychological Tests in Indian Manufacturing Industries
And Reservations Against It

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Abstract
Finding the proper employee-job fit has always been an issue, especially in the current dynamic and
complex economy. Corporates have begun using psychometric test to assess candidates and look to
strike employee-job fit which can contribute in the reduction of employee turnover and increase
employee productivity. With the rise in popularity of psychological tests in organizations, Indian
industries still remain hesitant to use these tests. Therefore, this paper tries to understand the reasons
for the reservations that Indian industries have in using psychological tests in the organizations. The
major dimensions under which the reasons fall are legal issues, cultural constraints, improper
utilization and other constraints, including financial. A qualitative research method utilizing content
analysis is employed for this paper. Convenience sampling was utilized and the sample selected for
this research focuses on South Indian HR managers. The research is conducted by interviewing HR
managers of seven manufacturing industries from South India.

Keywords: Psychological tests, content analysis, convenience sampling

Introduction
Psychometrics is the sub-stream of testing and assessment, which studies the educational and
psychological measurements of a subject. The usages of psychometric tools are now becoming more
extensive in the organizations because they are a cheaper and quicker way of selecting the competent
candidates and also assist in eliminating unskilled applicants at a very early stage of the recruitment
process. From a human resource perspective, the use of psychometric tests reduces the effort and
workload considerably as the initial screening interviews can be replaced by them. The surveys done
all over the globe regarding the usage of psychometric tools in the organizations shows that there has
been a considerable steady growth in the rate of usage, which is now heading towards the creation of
specialized tools for each organization according to its nature and practices. The psychometric tools
are generally used for predicting candidates’ performance, assess whether the candidate will align
himself to the company’s culture, to obtain information regarding the applicant prior to the interview
etc. Levitt.R.E, (1994)

The psychometric tests can be roughly classified into eight subtypes, which assess the aptitude,
verbal reasoning, numerical reasoning, inductive reasoning, abstract reasoning, assessing personality,
motivation, accuracy and knowledge of the subjects. The recruitment needs in organizations are aided
by these qualities of the psychometric tests to a very large extend. The assessment of traits like
personality, intelligence, attitudes and belief systems is very crucial when you are hiring personnel especially when the objective is to identify some of the hidden less obvious attributes. The wide applications of psychometrics in the organization include:

- Selection of personnel where the tests aid the recruiters to determine the candidates who can best fit into the positions available.
- Personnel development and training, assessment of the existing skills will help the trainers to help the employees to develop their skills and cultivate new skills which will make them more competent.
- Team building and development, tests like Hogan development surveys are specially devised to identify and measure the potential sources of relationship tensions.
- Career development and progression, the tests like Holland codes and Schien’s career anchors helps personnel to uncover the interests and values that act as the fundamentals to the overall job satisfaction.

In a developing country like India, the rate of usage of these psychometric tests is still not established nor shows a steady development (Poskey, 2001). Even though wide ranges of tests are available in the market for the assessment of the qualities of the applicants in India, they are not yet being widely used. The study aims at identifying these causes for the reduced use of psychological tests, which might possibly contribute to the ineffective recruitment processes, which happens in the country. From the secondary data collected from certain sources, the authors identified certain general instigates which produces a stigma or certain stereotypes the authorities hold toward the application of psychology in the work place (Poskey, 2001).

Some of the identified causes were the legal complications which may arise due to the use of the same, the cultural constraints, the improper utilization and other constraints which includes all the probable reasons which encourages the above mentioned stigma or stereotyping. There have been various factors which have caused an augmentation in the reservations against utilization of psychological tests in India. They are legality issues, cultural constraints, improper utilization and other constraints. Legality issues such as the test being highly intrusive threatening and causes discriminations are the factors that have been described which makes the organizations averse to using tests. Through the involvement of the top management, it may help reduce any distrust in the use of these instruments for the selection process, hence reducing any legal regulations or cost controls that may deter the use of these tests.

Creech (1966) expressed how certain psychological test results in the government setting have been held against an individual for a lifetime. The article stated that certain tests are solely used for the purpose of estimating the deviance from social norms and has no significant means within itself of dealing with the individual. Another fundamental issue raised by the article was the scores obtained on the test. It stated that these scores can be misleading since certain tests have the population samples among the total samples. In conclusion, the representative samples were never used in the field.

The second factor, which can be singled out, is the cultural constraints aspect. Sub-factors within this – language, misunderstanding and education portray how tests developed in the West are not suitable for the Indian context without appropriate adaptation. Existing literature in the field indicate the need for industrial psychologists and the top management to be involved in the development of new psychological tests which will contain the appropriate language for the particular area and be suitable to the particular culture for the accurate measurement of the desired aspect rather than relying on non-native tests which were originally developed for clinical practices.

The third factor to be cited is the other constraints which will include the test not being definite as in not job-centered, ability of candidates to fake the results and non-availability of the tests. In order to overcome the above mentioned factors, organizations should make sure that instead of a single test, a battery of tests are administered which will cater to all the aspects and also weed out the incongruence that might arise due to faking as well as providing socially desirable responses. Additionally, the tests should not be considered an end unto themselves but as a means to the end. The tests should provide information which should be utilized in the interview process which will further
strengthen the understanding of the employee since the psychologist or employer can effectively probe due to the available information. Also industrial psychologist can utilize the tool of structured observation in unison with the tests by incorporating work sample, situational judgment test, leaderless group exercises, in-basket exercises which will increase the ecological validity of the decision that will be taken based on the information obtained. Care must also be taken to ensure that the results obtained by the individual on various psychometric tests must only be used specifically and exclusively for the purpose of which the tests were conducted. It must not be carried forward for any other future use. The services of a professional or external agency trained to conduct and evaluate such tests can also be utilized. The above-mentioned points too will manage the factors that cause improper utilizations of the tests.

Another problem arises from the fact that psychological tests have traditionally been inclined towards the blue-collar, clerical workers and sales, because of the naive notion that this was the area where the major increase in efficiency could be recorded (Mechanical Ability Tests). Also, the use of tests for managerial level recruitment falls short of expectations since there is a lack of definition of the exact nature of executive duties and lack of valid indicators of successful job performance. Another huge hurdle that has been observed is that the term executive category does not depict a homogenous class of individuals but they consist of various people at different managerial levels with various job functions and skill sets required. (Monappa & Saiyadain, 1976)

Merwe (2002) in his analytic study found that only a few companies use psychometric tests together with other methods to aid occupational decisions and not in isolation. He also noticed that that at times the tests were used by people who were not well informed about the measurement bias and the test users were often not trained, resulting in erroneous conclusions. He suggested that psychometric tests require proper collaboration between test users and policy makers for an in depth study of the field of psychometric testing as well as for greater accuracy.

Stabile (2002) explained the need for such tests due to the lack of information about the candidates from the previous employers as well as from other sources. However, the author also found many factors that are detrimental to the recruitment process. Each job requires a different emotional or personality trait for its success, but it is not established as to what personality traits would lead to this success. Although there exists a wide variety of psychological tests used in a clinical setting, there is no validity or reliability of its usefulness in an organizational setting. Administration by non-trained psychologists and assistants providing candidates answers made the test ineffective. Additionally, complications arose due to the nature of infringement of personality tests and its discrimination effect towards certain participants.

Aggarval (2009) discussed how organizations, in their attempt to recruit and develop their organizations, hastily resort to the usage of personality tests that are not native to our country and are not meant for an organizational setting. He also stressed that lack of fluency in English, situational based questionnaires which are not meant for entry-level candidates since they do not have a prior knowledge of situations such as “I do not like to confront my managers”, and other factors lead to the lack of viability of such tests. Another study that adds to this debate is the study conducted by Birkeland, Manson and Kisamore (2006) on possibility for fake the psychological tests. A comparison of job applicant and non-applicant personality scale scores among 31 papers were meta analyzed in the study and the findings indicated that applicants were the ones who scored better than the non-applicants in specific arenas like emotional stability, openness, consciousness and extraversion. The authors also learned that the ranking of mean differences were altered significantly according to the job needs which indicated that the job applicants manipulated the test scores on personality dimension which were perceived as relevant to the job.

Almost all big companies around the world use these tests for various purposes besides recruitment. In the USA, the use of psychometric tests is much more wide spread, due to the governmental accreditation policy on use of these tests. Tests such as 16PF, MBTI etc. are increasingly being used by HR departments across the globe and the trend has caught on in India over the last two years. However, there still exists some amount of uncertainty regarding the use of these tests. There are common issues in the review of literature regarding the reservations against the use of
psychological tests in organizations. The main dimensions seen are cultural constraints, legal constraints, improper utilization and financial constraints. Due to these constraints, there exists a lot of uncertainty, especially in India, about the use of psychological testing for the purpose of selection of the right candidate for the right job.

The present research aims to understand the attitude of the Indian human resource managers from manufacturing industry towards the use of psychological testing.

Method

Sample

A sample of five Human Resource Managers from manufacturing industry from Bangalore and Goa were selected based on convenience sampling method. Experiences of the sample ranged from 5 years to 20 years in manufacturing industry. Age of the sample ranged from 26 years to 58 years.

Design

This is a qualitative research as this is an inductive study to understand the various factors that cause the reservations against the usage of psychological tests in organizations. Content Analysis was utilized for the purpose of the same. Open and axial coding was undertaken followed by respondent validation to verify if the themes generated were what the respondents meant.

Instrument

Self designed, semi-structured interview which consists of nine questions which were approved by an expert. Questions of the interview were developed under three based category such as legal issues, cultural issues, implementation issues. The interviews, on an average took about 17 minutes each.

Data analysis

Content analysis was done to identify the major contents from the responses of the subject. The grounded theory was utilized under which initially, the open coding was used to develop the major themes, followed by usage of axial coding to develop an interconnection between the sub-themes. Frequency and percentage analysis were also done based on the contents evolved from the analysis.

Results and Discussion

Results of the content analysis of the responses are presented in this section. Three categories of responses were emerged from in the analysis such as Legal constraints, Cultural constraints, and Implementation constraints.

<table>
<thead>
<tr>
<th>Sub-factors</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>Discrimination</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>Privacy issue</td>
<td>3</td>
<td>60%</td>
</tr>
</tbody>
</table>

One of the category obtained from the responses were legal constraints. Legal constraints refer to legal regulations followed by the country as well the organization that could deter the use of psychological tests by organizations. William Creech (1966) also reported such issues about usage of psychological tests. Through content analysis, three main themes regarding legal constraints were obtained, they are: Risks, Discrimination and Privacy issues.

The first sub factor being ‘risks’, refers to the various legal risks that an organization could face from the use of these psychological tests. Two out of a total of five respondents or 40% of the respondents highlighted these legal risks. From the responses it could be inferred that the respondents were not confident about the legal validity of psychological tests currently used by organizations. One of the responses highlighting this issue stated, “In Public Limited Companies, a simple RTI filed by a single candidate, could affect/cause delays in the hiring process. In both type of companies, if psychometric testing tools were used to promote/fire employees, there could be some legal complications if the employees are able to prove that the questions were inappropriate or unfair”.

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The second sub factor, ‘discrimination’ was discussed by two out of a total of five respondents or 40% of the respondents. Discrimination refers to the prejudicial or unjust treatment of different employees through the use of psychological tests. One such issue regarding discrimination was discussed by one respondent who stated that, “The use of such assessments can sometimes present real barriers to those with disabilities”.

The third and final sub factor, privacy issue was discussed the most out of the three sub factors i.e., 3 out of 5 respondents or 60% of the respondents. The issue of privacy refers to the fear regarding informational privacy i.e. the rules regarding the use of personal data, as well as the uncertainty regarding the maintenance of anonymity of clients. One respondent stated that, “Many times the questions in such test ask lot of personal likes/dislikes which help to map the individual and it is an intrusion and this may put the candidate into unease and he/she may not give response”.

Table 2

<table>
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<tr>
<th>Sub-factors</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Language and comprehension</td>
<td>5</td>
<td>100%</td>
</tr>
<tr>
<td>Non-adaptable versions</td>
<td>4</td>
<td>80%</td>
</tr>
</tbody>
</table>

Cultural constraints refer to the variations in cultures that will decrease the feasibility, reliability and validity of the psychological test in the non-native area. Under this dimension, we were able to develop two factors from the resultant content analysis. They are: language and comprehension and non-adaptable versions.

The first sub-factor, language and comprehension refers to the misunderstanding that the employees will have while answering the items on the scale due to the usage of language that is not the normally used vernacular by the employees from the non-native area in which the test is trying to be utilized. This view was endorsed by all five respondents and secured a cent percent out of the total sample population. Statements like “They also require a certain cultural and educational background in English as psychometric tests in vernacular languages are not available. Both the content and purpose of the test are open to misinterpretation by the employees,” from the respondents of the interview clearly reflect the need for culture-fair or adapted versions of the test.

The other sub-factor, non-adaptable versions indicate the lack of adapted versions of the western psychological test and clinical tests into industry oriented tests which result in not having the appropriate sample to which the scores and percentiles are compared to thus the ability to generalize the results also will be hampered. This view was endorsed by four HR managers which consist of 80% of the sample population. An example of such view is by Respondent 2 who feels that “Assessment should be sensitive to local attributes.” Our findings in this sub-factor can be related to the work conducted by Aggarval (2009) in which he discussed how organizations, in their attempt to recruit and develop their organizations hastily resort to the usage of personality tests that are not native to our country and are not meant for organizational setting. He also stressed that lack of fluency in English, situational based questionnaires which are not meant for entry-level candidates since they do not have a prior knowledge of situations such as “I do not like to confront my managers” and other factors lead to such tests as unviable.
In the present study, implementation constraints refers to those factors that decrease the probability of organizations utilizing psychological tests even though the legal and cultural factors are overcome and also describes the factors because of which the results of the test will be rendered unavailable.

Under the implementation constraints, five major themes were obtained after careful content analysis. The five themes are not definitive, contra-intuitive, faking, non-availability and lack of information. The first sub-factor i.e. not definitive describes how psychological test by itself cannot pin-point the causal factor, or provide accurate job-person fit during recruitment. This view was endorsed by three out of the five HR managers we interviewed which is 60% of the total sample. Respondent number 3 specified that, “As long as tests are looking at common traits or behavioral traits, we can use the tests for managerial/behavioral levels. However, if the tests are supposed to test role specific behaviors then we cannot use the same tests”. The concerns of this particular respondent highlight a critical drawback into how psychological test are not an end unto themselves but rather a means to an end.

Another sub-factor which was obtained from the analysis is the fact that at times psychological tests are contra-intuitive. Contra-intuitive results refer to the aspect that at times psychological tests provide results that are against popular beliefs. “Sometimes managerial staff score lower than operational staff, a contra-intuitive outcome,” was what Respondent 1 felt. He believed that managerial staff would be more competent than operational staff and hence such a result would disturb the equilibrium of the organization. This view was endorsed by one HR manager and consists of 20% of the sample population.

The sub-factors of faking and non-availability scored a frequency of two HR managers each which comprises of 40% of the sample population. Faking describes how employees can fake the results by providing socially desirable answers while non-availability refers to hurdles faced by organizations in obtaining the requisite tests. These include financial constraints and lack of appropriate tests designed for the particular purpose. An example of the views of the HR managers on faking is “Many employers worry that job candidates will ‘fake good’ in their responses to personality, attitude, and interest tests during the employment testing process to increase their chances of being hired. They believe candidates intentionally ‘fake good’ to create a good impression.” This result can be drawn in comparison with the study conducted by Birkeland, Manson and Kisamore (2006) revealed how easily individuals can fake in a personality tests.

The last sub-factor we were able to obtain is lack of information. This sub-factor refers to the gap in knowledge about psychological tests that still exists in the current Indian scenario. 60% of the sample population expressed importance of this sub topic. Statements like “Moreover, any sharp HR can come up with a good question bank within a day by searching for test designing materials on the internet,” displays the lack of clear understanding on what is required in developing a reliable and valid psychological test. Merwe (2002) in his analytic study on "psychometric testing and human resource management” also explained how individuals who utilize and administer the tests were not well informed about the measurement bias and the test users were often not trained, resulting in erroneous conclusions.

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<td>3</td>
<td>60%</td>
</tr>
<tr>
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<td>1</td>
<td>20%</td>
</tr>
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<td>2</td>
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</tr>
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Model

Based on our findings, we developed the following model:

- Non-definitive
- Non-Availability
- Faking
- Contra-intuitive
- Lack of information

- Discrimination
- Risks
- Privacy Issue

The model depicts three interacting factors which are interdependent and their boundaries are impermeable.

Conclusion and Suggestions

As the most discussed issue is regarding the privacy of tests, care should be taken to ensure that the employee is informed regarding the use of the data obtained from them. An overview of the relevance of the data being obtained can be given to the employees as far as possible to put the employee at ease. Through the use of legally binding contracts and strict regulations imposed by the company, employees can be ensured that their data will not be misused or revealed. Through this process more honest responses can be obtained from employees. The questions that require candidates to reveal their disabilities or personal preferences and infringe into their privacy should be weeded out by pre-vetting the test by qualified and experienced psychologists. There is a need for review of the prevailing tests to ensure its legal status and certification by an authorized institution could reduce the risk of legal impediments.

In order to decrease these factors, industrial psychologists and the top management should be involved in the development of new psychological tests which will contain the appropriate language for the particular area and be suitable to the particular culture for the accurate measurement of the desired aspect rather than relying on non-native tests which were developed for clinical practices. Also the usage of non-verbal tests should be encouraged in organizations in which not many employees are fluent in English.

Organizations should make sure that instead of a single test, a battery of tests are administered which will cater to all the aspects and also weed out the incongruence that might arise due to faking and providing socially desirable responses. Also the tests should not be considered an end unto themselves but as a means to the end. The tests should provide information which should be utilized in the interview process which will further strengthen the understanding of the employee since the psychologist or employer can effectively probe due to the available information. Further, industrial
psychologists can utilize the tool of structured observation in unison with the tests by incorporating work sample, situational judgment test, leaderless group exercises, in-basket exercises which will increase the ecological validity of the decision that will be taken based on the information obtained.

Besides this, test constructors should maintain their integrity and follow the ethical guidelines such as selling the test only to qualified psychologists and not to individuals without any knowledge and experience. Additionally, answer keys should not be provided to prospective employees who want to know the right answers which will increase the chances of them being recruited. This will improve the reliability and validity of the tests. Developing awareness among the current HR managers can also decrease the gap existing in understanding the nuances of psychological tests and why only trained professionals should utilize it to obtain the accurate results.

References


