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**THE USEFULNESS  
OF  
PERSONALITY QUESTIONNAIRES  
IN  
OFFICER SELECTION AND TRAINING**

**A paper submitted in fulfilment of the Master of Science Degree**

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### Abstract

The aim of the current research was to assess whether the Revised Eysenck Personality Questionnaire (EPQ-R) and the Gordon Personal Profile-Inventory (GPP-I) could predict future behaviour in a sample of NZ Army officers and officer cadets. Personality questionnaire data completed at the time of selection was correlated with a workplace behaviour questionnaire (WBQ) developed specifically for the purposes of the research. It was hypothesised that (1) EPQ-R and GPP-I scales should correlate significantly with their corresponding scales on the WBQ, (2) the Neuroticism/Lie and Psychoticism/Lie correlation should indicate the presence of faking, (3) officers serving longer than three years should show more similar personality profiles than officers serving less than three years, (4) immediate superiors of the same gender and ethnicity should rate participants more favourably than those of a different gender and ethnicity, and (5) scores on the WBQ measuring High Psychoticism, High Neuroticism, Low Emotional Stability, Low Ascendancy, and Low Cautiousness should not be endorsed highly if selection has been effective. Only the fifth hypothesis was supported and the results are discussed in light of methodological shortcomings and earlier research.

## Introduction

Selectors are faced with the task of assessing the current abilities of the job applicant and predicting whether the person will continue to perform those abilities while employed. Selectors use many tools to aid this process, such as application forms, interviews, and questionnaires. In particular, cognitive ability test scores have been associated with success in many different occupational areas (Robertson, 1994). Personality questionnaires have often been used because they help the selector judge whether a person will “fit” in an organisation. In addition, research has found that some personality traits are good predictors of job performance criteria (see Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991). Personality questionnaires have not, however, enjoyed widespread usage in selection contexts. The reasons for this form the focus of the literature review, together with how the validity and, hence, usefulness of personality questionnaires can be improved for selection purposes.

## Overview of Issues

This study aimed to assess the usefulness of two of the personality questionnaires used by the NZ Army, the Eysenck Personality Questionnaire (Revised) (EPQ-R) and the Gordon Personal Profile-Inventory (GPP-I), for officer selection. A workplace behaviour questionnaire (WBQ) was developed specifically for the purposes of the research to measure behaviour associated with each of the personality questionnaire scales. As the EPQ-R and GPP-I are used for many purposes in the NZ Army, for example, officer selection and placement, it is important to ensure they measure what they claim to measure, and that they are fair, efficient, and effective. This is because employment and career paths often constitute a major part of someone’s life, therefore, these decision-making tools need to be as accurate as possible. Furthermore, inaccurate decisions are costly to an organisation in terms of resources and spending extra time and money in repeating the selection process when attrition occurs. The literature review will focus on important issues relevant to the use of personality questionnaires in selection settings, in particular, the military selection setting.

First, why use personality questionnaires in the first place? For one thing, they have been shown to provide incremental validity over the more standard cognitive ability tests used in personnel selection. Consequently, large organisations, such as the NZ Army, may use an assessment centre selection process that combines cognitive ability tests with personality questionnaires. Other sources of data, such as leaderless tasks and situational tests, are also combined to increase the validity of the assessment centre data and make a more accurate decision. Second, validity research has focused on solving the lack of structure of personality traits for selection purposes. Having a structure provides a firm basis for developing questionnaires to measure the personality construct. Construct definition, then, is an important step in ensuring sound measures are developed. The Five Factor Model (FFM) was one answer to defining the personality construct and has been useful in predicting future performance. Third, for a questionnaire to be useful, it should be based on an empirically-validated theory. Furthermore, for selection purposes, this theory needs to be linked to theories concerning job performance so that criterion development can occur. Job analyses using personality-relevant criteria provide one way in which personality can be linked to job performance.

Fourth, while scale development issues are important, the usefulness of any personality questionnaire will depend on the context for which it was designed. Personality questionnaires specifically developed for selection settings have shown higher validity than standard personality questionnaires used in a selection setting. How the data is to be used, then, remains an important consideration in validating personality questionnaires for selection purposes.

Finally, a major issue concerns the ease with which personality questionnaires can be faked in selection settings. Some researchers have developed methods to combat faking, such as lie scales, response formats, and peer rating forms, all with varying degrees of success.

In this study, data from personality questionnaires completed at the Officer Selection Board (OSB) stage were correlated with data obtained from a workplace behaviour questionnaire (WBQ) developed for the purposes of the research. The WBQ contained items that described behaviours that each of the EPQ-R and GPP-I scales were thought to exhibit. These items were written to assess whether the EPQ-R and GPP-I measured what they



claimed to measure. Job analysis criteria were not used as the NZ Army's criteria were based on Australian and British Army officer job analyses. A review of the officer selection process, of which the current research forms a part, is underway and includes the development of a job analysis of the NZ Army officer role. It was thought that research into personality and job performance should wait until this job analysis had been completed. Hence, the aim of the current research was to see whether each of the scales from the personality questionnaires correlated with their corresponding behavioural scale in the WBQ. If they did, then the two personality questionnaires could be seen as useful selection tools as they would be successful in helping identify future behaviour associated with that particular personality scale. Furthermore, if selection based on these personality questionnaires had been successful, then there should be a low endorsement rate of items associated with the undesirable personality profiles.

## Literature Review

### Early Research

Early meta-analyses did not show promising results for the validity of personality questionnaires in selection. For example, Guion and Gottier (1965) performed a meta-analysis of validity studies conducted during a twelve-year period that focused on the relationship of personality questionnaire scores and successful behaviour in civilian employment. They found that validities reported were weak, and some were negative. Although Guion and Gottier (1965) conceded a need for personality measures to predict workplace behaviour, they did not recommend their use because the studies surveyed contained poor research designs, there was no theory relevant to workplace behaviour, and only weak validities were found (Guion & Gottier, 1965). Subsequent research has been directed at identifying how the validity of personality questionnaire data can be improved for selection purposes. In particular, later research has shown that personality questionnaires were useful for selection as some traits, e.g., Conscientiousness, were predictive of successful job performance (Barrick & Mount, 1991).

One main area of research concerned the incremental validity of personality questionnaires. Day and Silverman (1989) defined incremental validity as the ability of personality questionnaires to predict job criteria over and above that of cognitive ability tests.

Overall performance was often comprised of both task and people requirements and, while cognitive ability was related to task requirements, personality was thought to better account for the people requirements (Day & Silverman, 1989). Research has supported this theory. For example, McHenry, Hough, Toquam, Hanson, and Ashworth (1990) performed a study as part of a large-scale project to develop an officer selection procedure for the US Army. They sought to assess the ability of the Assessment of Background and Life Experiences (ABLE) to provide incremental validity over cognitive ability tests. McHenry et al. (1990) hypothesised that the ABLE scores would add significant predictive validity to the job performance criteria of Effort and Leadership, and would best predict Personal Discipline, and Physical Fitness and Military Bearing. Correlates were significant at 0.33, 0.32, and 0.37 respectively for the three criteria, which provided support for their hypothesis (McHenry et al., 1990). Furthermore, the ABLE composites were the poorest predictors of the task-related criteria, which were better predicted by the cognitive ability composites. However, when used as a composite with other predictors, the ABLE scores predicted the task-related criteria better than they predicted the people-related criteria (McHenry et al., 1990). Finally, regression analyses found that the ABLE accounted for the greatest increase in incremental validity. This research, then, provided support for the use of personality questionnaires in personnel selection as they were shown to add meaningful information over and above that provided by cognitive ability tests.

Similarly, Black (1997) sought to determine whether the Revised NEO Personality Inventory (NEO-PI-R) displayed incremental validity over cognitive ability tests. The NEO-PI-R was administered to police recruits during the first month of training. Performance scores following completion of basic training and the pre-selection cognitive ability test scores were obtained for the recruits. Black (1997) found that the cognitive test score correlated the highest with the job performance score (0.33). Regression analyses showed that the NEO-PI-R did provide incremental validity over cognitive ability test scores as a predictor of job performance. The correlation for cognitive ability tests was increased to 0.43 with the addition of the personality questionnaire global factors and further raised to 0.47 with the addition of the subfactors (Black, 1997). It is worth noting that Black (1997) referred to the "job performance" score when, in fact, the performance measure was that of training performance, an arguably different construct to job performance.

### Summary and implications

Early uses of personality questionnaires were not promising for selection settings. However, later research showed that personality questionnaires provided a picture of a person's general character and could offer incremental validity over cognitive ability tests. In particular, the increased validity provided by these questionnaires gave more accurate information about a candidate for an officer role in the military and in the police force. As an officer's role can be stressful, and requires good leadership, energy, and assertiveness, using personality questionnaires with demonstrated validity of the required traits will aid the selection process, as these traits may not be tapped by cognitive ability tests. Personality questionnaires are only a part of the selection process; hiring decisions are not made on the basis of these results alone. Rather, many parts make up the process, and the overall impression given from the other parts of the selection process determine the likelihood of being hired. To further improve the validity of the selection process, some organisations, such as the NZ Army, combine personality questionnaires and cognitive ability tests with other exercises to form an assessment centre.

### Assessment Centres

An assessment centre is an example of a comprehensive selection process in which applicants or potential management candidates are involved in a number of exercises designed to assess leadership potential and which resemble the environment in which they would work should they be successful. A military assessment centre, therefore, would consist of tasks that an officer could expect to carry out during a normal day, but also tasks that may be required during an operational posting such as strategising and problem-solving tasks. Although costly, assessment centres are seen as highly valid and efficient selection procedures. They let psychologists and other managers gain valuable information about individuals by using a variety of assessment techniques in a residential programme administered over a period of days (Goodstein & Lanyon, 1999). Measures completed include psychological tests such as personality questionnaires and intelligence tests, interviews, and biodata forms (Goodstein & Lanyon, 1999). Empirical evidence has shown that using personality questionnaires as part of this process can predict managerial success (Goodstein & Lanyon, 1999). The personality questionnaires are often completed, scored and interpreted at the beginning of the programme before any other information is obtained

about the applicant. This information is generally not discussed with the other raters until the end of the programme (Goodstein & Lanyon, 1999).

Assessment centres are also comprised of leaderless discussion groups and situational tests (Goodstein & Lanyon, 1999). During a leaderless task, raters observe the dynamics as a group discusses an assigned topic or performs a practical task. The applicants are often rated on dimensions such as energy, initiative, planning, communication skills, interpersonal skills, decision-making, and persuasiveness (Goodstein & Lanyon, 1999). Goodstein and Lanyon (1999) did not state how these dimensions were developed, for example, whether they were developed from job analyses and the like. Peer ratings may be taken from participants during the process as well (Goodstein & Lanyon, 1999). It is not difficult to see how these dimensions relate to success in the armed forces. Leaders and, therefore, officers, require energy as well as the ability to take initiative. Officers may be placed in situations where they must think and decide on a course of action quickly. Tasks need to be planned much as managers would plan tasks for their employees. Officers may need to come up with new ideas and, importantly, they need to communicate their decisions to their soldiers to ensure the soldiers understand their tasks. Furthermore, officers need to be able to relate well to their soldiers as teamwork is an important part of being a member of the armed forces. Persuasiveness, as it relates to the armed forces, concerns the ability to lead a team, and to be respected and accepted by that team so that subordinates will perform tasks they may not wish to do.

Situational tests involve placing the applicant in a situation where a senior manager is away for the day and the applicant must take over the manager's work. The applicant is required to sort through the contents of an in-tray and prioritise the tasks (Goodstein & Lanyon, 1999). This task is essentially a problem-solving task, and gives assessors opportunities to see how candidates come up with solutions. Again, problem-solving ability in the armed forces is very important, particularly in a wartime situation where dangerous situations may require quick-thinking. In the case of a job applicant, the resulting information gathered from the assessment centre tests and tasks is used to decide whether or not to hire the person. In the case of management potential, the information is used to decide whether the individual fits in with the organisational culture so that a management development plan can be written (Goodstein & Lanyon, 1999).

How, then, do assessment centres measure up as selection tools? Goodstein and Lanyon (1999) reported that assessment centres have shown validities of 0.37, and therefore, were valid means of selecting people. Eatwell (1998) reported a validity of 0.41 for an assessment centre, and claimed that, depending on the tools and procedures used, validity could range from -0.04 to 0.74. Similarly, Robertson (1993) reported validities obtained through meta-analyses of 0.41, 0.43, and 0.25 against performance and supervisor ratings. Borman (1982) conducted a study that sought to develop, run, and evaluate an assessment centre designed to measure potential for success as a US Army recruiter (Borman, 1982). The subjects were assessed on first impression, physical attractiveness, and likeability ratings, structured interviews, cold calls; interviews; interview with a concerned parent; five minute speech about the army; an in-basket exercise; and assessment of human relations, selling, organising, and overall performance (Borman, 1982). The ratings were correlated with criteria of scores on three tests measuring mastery of prospecting and selling techniques, and ratings of telephoning and interviewing techniques (Borman, 1982). The validity for the exercises was significant at 0.32, but the first impression, likeability, and physical attractiveness ratings were not significant (Borman, 1982). When the assessment ratings were unit weighted on each dimension and pooled across the six exercises, the validity for the exercises was higher (0.48). However, a range restriction occurred in that seven people dropped out who had either very high or very low ratings (Borman, 1982). When corrected for range restriction, the validity rose to 0.53 (Borman, 1982). Borman (1982) concluded that the assessment centre was reasonably successful in predicting training performance in a military sample.

Perkins (1998) investigated whether High Extraversion and Low Neuroticism could predict leadership ability in an assessment centre used for selecting British Army officers. Perkins (1998) hypothesised that High Extraversion and Low Neuroticism would show significant positive correlates with passing officer selection and with scores on the Regular Commissions Board (RCB) performance dimensions. Also hypothesised was that significant correlates would exist between individual item scores on a personality questionnaire and passing officer selection and scores on the RCB dimensions (Perkins, 1998). The OCEAN, a personality questionnaire based on the FFM, was administered to officer candidates during a pre-RCB selection phase. The candidates were told the results would not affect officer selection (Perkins, 1998). Those who passed this initial phase went on to complete the RCB, an assessment centre of three days duration in which performance on written tests, group



discussions, analysis and planning, lecturettes, leaderless group tasks, command tasks, obstacle course, interviews, and a race were assessed (Perkins, 1998).

Perkins (1998) did not find any significant correlates between High Extraversion, Low Neuroticism, and passing officer selection. However, OCEAN facets showed a negative correlation between worrying, shyness and passing officer selection (Perkins, 1998). Furthermore, no significant correlates existed between High Extraversion and Low Neuroticism and RCB dimensions, although some of the subfactors (Worrying, Shy and Bashful, and Socially Active) did significantly correlate with some of the dimensions. Scores on individual items of the OCEAN Extraversion and Neuroticism scales did, however, display significant correlates with passing officer selection and with RCB performance dimensions (Perkins, 1998). Perkins (1998) also found that the OCEAN did not detect faking and impression management which he gave as one explanation for why the OCEAN only correlated with passing officer selection and RCB dimensions at the item level. Perkins (1998) concluded the Big Five was not adequate for selection purposes as some of the factors were confused and the global factors did not predict passing officer selection or RCB dimensions as well as the sub-factors. Assessment centres, then have been shown to demonstrate good validity depending on the exercises and measures used. The NZ Army use an assessment centre for their officer selection process.

#### The New Zealand Army Officer Selection Board (OSB)

The NZ Army OSB is used to select candidates for officer training. Assessors are comprised of Military Testing Officers (MTOs) and Army Psychologists. The selection process consists of a pre-selection phase in which candidates complete a cognitive ability test, an essay-writing test, a medical screening form, and an interview with a recruiting officer. If successful at a “paper” selection board, where the Senior Psychologist (Army) and the Military Secretary decide on the basis of the pre-selection exercises who is able to continue to the next stage, the candidate then attends the 4½ day OSB.

At the OSB, the candidates are divided into groups called syndicates. The first 1½ days consists of group and individual indoor and outdoor activities designed to allow assessors to assess applicants on criteria found, through British Army and Australian Army

officer job analyses, to be important in the officer role. Peer ratings are gathered, personality questionnaires are administered and interviews are conducted during the OSB. Successful applicants later attend a medical board.

The final day features the final board meeting where the MTOs present their gradings on the selection criteria and the buddy ratings and then rank orders them. The MTOs then give their gradings of In or Out for each candidate. The psychologists, deputy president, and president give their gradings of In or Out and these are all discussed to decide finally who has been successful. The president then informs each candidate of the decision. The MTOs are trained in debriefing unsuccessful candidates and feedback is provided on strengths and weaknesses to both successful and unsuccessful candidates. This latter part is important as the feedback given to successful candidates can assist them to work on particular areas prior to commencing officer training.

The NZ Army officer selection process, then, does not rely solely on the basis of personality questionnaire results. The OSB process utilises information across the range of exercises that make up the OSB; information across all components is used to assess candidates against the criteria identified from job analyses as relevant to future job performance as a junior officer.

### Summary and implications

These findings suggest that, in general, assessment centres are a valid method of selection. The validity is affected by the nature of the criteria used, the type of exercises, and whether peer ratings are used. Furthermore, assessment centres are quite expensive to run, therefore, only larger organisations, in particular, the military, tend to put in the time and resources. The NZ Army officer selection procedure involves the use of an assessment centre, at which time the EPQ-R and GPP-I personality questionnaires are administered. However, personality questionnaire use is still controversial. Later research has attempted to remedy the problems associated with using personality questionnaires in selection. Guion and Gottier (1965) highlighted the need for an adequate organising structure of personality dimensions to increase their validity in selection. Research has shown the Five Factor Model (FFM) to be a promising taxonomy of personality traits for selection purposes.