RESEARCH PAPER

Psychometric Assessment of Social-Emotional Learning and Cognitive Development as Predictors of Workplace Performance

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ABSTRACT
There are 2 domains of functioning that are complementary and can be part of effective workplace behavior and functioning: 1) Social-emotional learning competencies. Social-emotional learning (SEL) are skills involving social-emotional functioning (e.g., self-knowledge, self-management, social awareness, relationship skills, and responsible decision-making), and cognitive functioning are skills involving thinking, problem solving, critical thinking and adaptation. While the SEL framework began in the educational environment, the skills can be applied at work when managing emotions, interacting with others, making decisions, and adapting to work (among other places).[9] This current review explores the psychometric measurement of each of these domains and the reported links between each and work performance. The empirical studies, as well as the results of the meta-analytic studies, also indicate the importance of reliability, construct validity, criterion related validity and incremental validity in development or selection of assessment instruments. Thus, an integrated assessment approach could facilitate a more holistic depiction of the competencies of the workplace than could the use of one of the psychological domains alone.[7],[8] However, it should be tested empirically instead of taken for granted when making claims of superiority with regard to prediction. The review mentions implications for employee assessment, employee development, training and recruitment, performance management and priorities for the future experimentation of implications. Further investigations of interactions between social–emotional and cognitive skills in a variety of occupations and complexity levels would be useful. Such evidence could help to create more contextual and widespread workplace assessment and employee development strategies.

Keywords: Social-Emotional Learning; Cognitive Development; Workplace Performance; Psychometric Assessment; Emotional Intelligence; Employee Performance.

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INTRODUCTION

In the workplace, there are several individual and contextual factors which influence performance levels, and, cognitive ability has been demonstrated to be criterion-related valid in the workplace. Besides cognitive skill, social and emotional skills have also become more prominent. Another recent meta-analysis revealed positive correlation between EI and organizational commitment, organizational citizenship behavior, job satisfaction, and job performance and a negative correlation with job stress; however, no distinction was made between ability and self-report EI.[2]

EI should not be thought of as a monolith, however. Hence, it seems better to clarify construct being measured vs. others that are similar having correlation as high as .29 between EI measured in mix and some other psychologic construct (e.g., personality, self-efficacy, cognitive ability and self-rated performance) as reported by Joseph et al. (2004) after accounting for the overlap with other constructs. The SEL framework, while it originates in the educational setting, the skills can be applied to the work place when: managing emotions, interacting with others, making decisions, adapting to work, etc. Reliability, measurement error, content validity, structural validity, construct validity and criterion validity are, therefore, important criteria in evaluating whether such constructs can be reliably and validly measured, making psychometric assessment essential.[7,8]

The measurement in the workplace has thus emerged as an important trajectory. Overall, the inclusion of evidence by

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Krishnakumar et al. (2019) who constructed and validated NEAT at the workplace, as well as in 5 studies report evidence of structural, convergent and predictive validity and relationships with job satisfaction, job stress, and job performance provide evidence that suggests that SE/C cognitive competencies should be examined as complement. Therefore, the present review will look at evidence regarding the psychometric assessment of these competencies, their links with workplace performance, construct differentiation, and workplace relevance, as well as the value of integrated assessment.

MATERIALS AND METHODS

Study Design

The manuscript has been prepared in the review format. It aims to create a set of synthesis of existing empirical and meta-analytical literature on social-emotional competencies, cognitive ability, psychometric measurement and job performance. Not a new sample of some individuals and/or new statistics collected.

Literature Identification

BM/L GDL and literature search in biomedical and psychological literature databases provided peer-reviewed and relevant literature especially literature in PubMed. The concepts searched were either combinations of the terms-emotional intelligence, social-emotional learning, cognitive ability, psychometric assessment, job performance, workplace performance, reliability or validity. Empirical studies, validation studies, systematic review and meta-analysis along with journal, publication details, author information and PubMed / DOI information were selected.

Eligibility Considerations

Relevant studies covered psychometric research on emotional and social-emotional competencies, cognitive ability and related constructs, along with reliability and validity assessment and their relationships with employee outcomes and job performance.

Psychometric Framework

Assessment instruments have been evaluated in terms of their Psychometric properties – as part of the development. These were: internal consistency, reliability, measurement error, content validity, structural validity, construct validity, criterion validity and predictive/incremental validity. While the principles of systematic evaluation of the properties of measurement are applicable to the more general context of psychological measurement, they underlie the principles that are related to the measurement of health properties.

Evidence Synthesis

A new quantitative meta-analysis was not conducted and results were qualitatively summarized as a narrative. The difference between ability-based and self-report measures and the difference between cognitive ability and personality as constructs; the specificity of assessment instruments to the workplace and the difference between association and prediction were considered.

RESULTS AND DISCUSSION

Psychometric Assessment of Social-Emotional Competencies

Various scores exist and it has been demonstrated that different ways of measuring social-emotional constructs exist, all of which have different implications about the scores. Ability-based EI instruments tend to evaluate one's performance when dealing with emotion-related tasks, while self-report instruments evaluate one's perceptions about how well he or she can deal with emotions.[1],[2] One area of context-sensitive assessment is the measures taken in the workplace. Krishnakumar et al. designed the NEAT as an ability-based measure based on scenarios in the workplace that involve perception, understanding and management of emotions. The final measure in the process of development had evidence of structural and convergent validity, and predictive relationships with outcomes in the workplace.[7]

The GECo is another work place-based approach. It's evaluated by workplace-based tasks and scenarios that are theory-based, and with emphasis on the four aspects of emotional competency: (1) recognition of emotions, (2) understanding of one's own emotions, (3) self-management of emotions, and (4) management of other people's emotions. Five studies and 888 subjects demonstrated its reliability, as well as the measurement of constructs it was designed to measure and the relevance of the instrument with other instruments used to measure EI. These results highlight the importance of assessing the degree of measure precision as well as construct definition and criterion relevance of assessment instruments. But, meta-analytic studies indicate that either of these measures (self-report and mixed) of EI may overlap considerably with measures of personality and cognition. This should not be interpreted as evidence of a uniquely different psychological trait required for the high correlations found to exist between EI and job performance that are observed should be compared to the other constructs. [1]

Emotional Competencies and Workplace Performance

Empirical research links emotional competencies with organisational commitment, citizenship behaviour, job satisfaction and performance, while reducing job stress. Doğru's meta-analysis highlights these broader workplace outcomes, while Joseph and Newman[11] found inconsistent links between ability-based EI and job performance, emphasising the need for contextually appropriate assessment rather than assuming a universal EI–performance relationship.

Cognitive Development and Workplace Performance

Another (and related) domain is cognitive ability. Its use in relation to work performance is evident from our times. Using a validity estimate that is corrected for the characteristics of different criteria led to a .22 validity estimate, while the wide range of estimates in different studies, and the variation in the periods of the studies, also had to be considered in reaching this corrected validity estimate. The other cognitive reflection domain examined,

caffeine use, also has received some study as an occupational predictor. Otero et al. conducted a cognitive reflection meta-analysis to investigate this possible link between cognitive reflection and training and work performance. These results suggest that it has some criterion validity and that reasoning-related constructs are sometimes useful in predicting job performance over and above cognitive ability.[4] This knowledge indicates that cognitive ability is a multi-dimensional construct, and that reasoning-related constructs may be useful in some situations when they account for some information beyond general cognitive ability. The evidence then suggests that this cognitive assessment should be part and parcel of a fuller picture of the performance in the workplace. Studies identify non-academic competencies such as reasoning, problem-solving and learning, alongside social-emotional skills including interpersonal coordination, emotion regulation and social judgement, as relevant to complex work depending on task demands.

Integrated Assessment

In theory, there is a validity to integrating social-emotional and cognitive competencies, since they are somewhat independent aspects of an individual's functioning. The cognitive skills may be used to learn, reason and problem solve at a higher cognitive level, but the social-emotional skills may be used in social-emotional regulation, social interaction, teamwork, and socially appropriate decisions. But integration should not be done on assumption, it should be done considering the incremental validity demonstrated. The scores of two instruments which measure the same constructs may only add a few points to each other if the scores are redundant. When measuring different aspects, however—and each independent aspect is linked to an assessment measure—then a combination of assessment can provide more information about functioning in the workplace. Given the focus of research on the dimensions that assessment centers are aimed at, incremental validity needs to be studied. This would entail using hierarchical or simultaneous regression models, using hierarchically or simultaneously cognitive and social-emotional variables in a theoretically valid order in the proposed integrated model, as there is additional variance in job performance beyond cognitive ability and personality, according to a meta-analysis.[12] Report on changes in explained variance, confidence intervals, effect sizes and diagnostics of the model. It is also important that an integrated model for making high-stakes decisions about personnel would be cross-validated or replicated prior to use.

Psychometric Requirements

A scientifically defensible assessment framework requires evidence across several levels: content validity should establish adequate construct representation, structural validity should confirm the expected factor structure, and internal consistency should assess scale reliability. Where stability is expected, test-retest reliability may also be required. Criterion-related validity should examine relationships with independently measured workplace outcomes. The COSMIN literature[8] distinguishes reliability from measurement error: reliability concerns an instrument's ability to differentiate individuals, while measurement error concerns the precision of repeated scores. Criterion selection is also important because performance may include task, contextual, adaptive and teamwork performance, productivity or supervisor ratings, and relationships with cognitive and social-emotional predictors may vary across these domains.

Applications in Employee Development and Assessment

Emotional competencies have ramifications for employee development. The above evidence suggests that trainable emotional competencies ought to be studied in greater detail, but careful evaluation of the effects of emotional-competency training in the workplace is necessary.[13] The results of the assessment may benefit in determining development needs, training programmes, leadership development and person-job requirements. However, quality of measurement and transparency, fairness, confidentiality and sound interpretation of the use of psychological assessment shall be taken into consideration. The scores are not aimed at being an absolute representation of the professional competence of a candidate.

Limitations of Existing Evidence

From the literature there are various disadvantages. Firstly, the concept of an emotional intelligence is conceptually distinct from the approaches to measuring it, and this makes directly comparing the results of different studies impossible. [1] Secondly, some of these self-report instruments overlap greatly with measures of personality and self-efficacy and self-rated performance.[1], Thirdly, workplace performance is multifaceted and relationships may differ in different occupational contexts.[4], Fourthly, historical evidence of ability do not automatically transfer to current occupational contexts. Fifthly, much of the available literature is correlational and should not be interpreted as evidence of causal effects between competencies and performance. Future studies should therefore aim to employ well-explicit theoretical models, validated measures, a variety of measures of performance (if available), a longitudinal design, and independent samples for replication. Social-emotional skills should also be studied to determine which provide incremental validity to cognitive ability and other well-established measures of personality.

CONCLUSION

From a theoretical viewpoint, SE and cognition appear different, and together are two complimentary factors contributing to success at the job market. The point is that each of such competencies may affect diverse aspects of employees, for instance, emotional competencies and employee outcomes or cognitive abilities and job performance, as supported by findings of available evidence; moreover, the level of job performance that is affected by both is dependent on such factors as method of measurement, context of the job, and nature of the

performance criterion. [1–6] Psychometric quality is therefore one of the main features of an appraisal system. A joint evaluation of socio-emotional and cognitive traits may give a better estimate of job performance, but this type of evaluation would be completely different and, as there are no studies on it, would require validation against other measures to justify its usefulness in predicting performance.

Meanwhile, the primary future studies can be done in two ways that, if they provide different results, will mean that there are differences in the performance of employees with SECs which are not explained by other workplace-related factors. Such research would be useful in enriching a body of literature and helping us understand what can be the consequences for human resource practices like employee development, job placement, training, and performance management.

On the other hand, further research could also be directed to understanding whether these skills differ when applied to different kinds of jobs, professions, and workplaces. Such information is not less important since it can enable the creation of reliable and properly integrated assessment instruments. Additionally, it would be useful to get data from various sources by carrying out research that examines the persistence of these skills, their changes over time, and the way they affect different kinds of workers. Longitudinal and multi-source assessment systems have a higher likelihood of identifying the effect of these skills on continued performance at the workplace**.**

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Conflict of Interest
Authors state that they do not have any conflict of interest.

REFERENCES

1. Joseph DL, Jin J, Newman DA, O'Boyle EH. Why does self-reported emotional intelligence predict job performance? A meta-analytic investigation of mixed EI. J Appl Psychol. 2015;100(2):298-342. doi:10.1037/a0037681.
2. Doğru Ç. A meta-analysis of the relationships between emotional intelligence and employee outcomes. Front Psychol. 2022;13:611348. doi:10.3389/fpsyg.2022.611348.
3. Law KS, Wong CS, Song LJ. The construct and criterion validity of emotional intelligence and its potential utility for management studies. J Appl Psychol. 2004;89(3):483-496. doi:10.1037/0021-9010.89.3.483.
4. Farh CI, Seo MG, Tesluk PE. Emotional intelligence, teamwork effectiveness, and job performance: the moderating role of job context. J Appl Psychol. 2012;97(4):890-900. doi:10.1037/a0027377.
5. Sackett PR, Demeke S, Bazian I, Griebie AM, Priest R, Kuncel NR. A contemporary look at the relationship between general cognitive ability and job performance. J Appl Psychol. 2024;109(5):687-713. doi:10.1037/apl0001159.
6. Otero I, Salgado JF, Moscoso S. Criterion validity of cognitive reflection for predicting job performance and training proficiency: a meta-analysis. Front Psychol. 2021;12:668592. doi:10.3389/fpsyg.2021.668592.
7. Krishnakumar S, Hopkins K, Szmerekovsky JG, Robinson MD. Assessing workplace emotional intelligence: development and validation of an ability-based measure. J Psychol. 2016;150(3):371-404. doi:10.1080/00223980.2015.1057096.
8. Mokkink LB, Terwee CB, Patrick DL, Alonso J, Stratford PW, Knol DL, et al. The COSMIN checklist for assessing the methodological quality of studies on measurement properties of health status measurement instruments: an international Delphi study. Qual Life Res. 2010;19(4):539-549. doi:10.1007/s11136-010-9606-8.
9. Elias MJ, Zins JE, Weissberg RP, Frey KS, Greenberg MT, Haynes NM, et al. Social and emotional learning: a framework for promoting mental health and reducing risk behavior in children and youth. J Sch Health. 1997;67(6):207-212.
10. Schlegel K, Mortillaro M. The Geneva Emotional Competence Test (GECo): An ability measure of workplace emotional intelligence. J Appl Psychol. 2018;104(4):559-580. doi:10.1037/apl0000365.
11. Joseph DL, Newman DA. Emotional intelligence: an integrative meta-analysis and cascading model. J Appl Psychol. 2010;95(1):54-78. doi:10.1037/a0017286.
12. Meriac JP, Hoffman BJ, Woehr DJ, Fleisher MS. Further evidence for the validity of assessment center dimensions: a meta-analysis of the incremental criterion-related validity of dimension ratings. J Appl Psychol. 2008;93(5):1042-1052. doi:10.1037/0021-9010.93.5.1042.
13. Mehler M, Balint EM, Gralla M, Pößnecker T, Gast M, Hölzer M, et al. Training emotional competencies at the workplace: a systematic review and meta-analysis. BMC Psychol. 2024;12(1). doi:10.1186/s40359-024-02198-3.