
Proprietà psicometriche della versione italiana della *Brief Calling Scale*

Annamaria Di Fabio¹ e Andrea Svicher²

Sommario

La *Brief Calling Scale* (BCS) è una scala a 4 item ampiamente utilizzata per valutare il *calling* in termini di presenza di *calling* e ricerca di *calling*. Il presente studio si propone di valutare le proprietà psicometriche della versione italiana del BCS in 208 lavoratori italiani. Per testare l'omogeneità delle due sottoscale (presenza di chiamata e ricerca di chiamata), è stata eseguita l'analisi, secondo il modello Item response theory di Mokken. Il coefficiente di scalabilità di Loevinger è stato calcolato a livello degli item e per i punteggi totali. L'affidabilità è stata valutata tramite gli alfa di Cronbach. La validità concorrente è stata testata tramite correlazioni con il *Calling and Vocational Questionnaire* (CVQ). La *Brief Calling Scale* ha mostrato eccellenti coefficienti di Loevinger sia per gli item che per i punteggi totali sia per quanto riguarda la presenza di *calling* che per quanto riguarda la ricerca di *calling*. Anche gli Alpha di Cronbach hanno mostrato valori eccellenti. La validità concorrente con il CVQ è risultata buona. La versione italiana del BCS si è rivelata uno strumento altamente affidabile per valutare il *calling*.

Parole chiave

Calling, Brief Calling Scale (BCS), Proprietà psicometriche, Lavoratori.

¹ Dipartimento di Formazione, Lingue, Intercultura, Letterature e Psicologia (Sezione di Psicologia), Università degli Studi di Firenze, Firenze, Italia.

² Ricercatore in THE-Toscana Health Ecosystem NextGeneration UE-NRRP, Dipartimento di Scienze dell'Educazione, Lingue, Interculture, Letterature e Psicologia (Sezione Psicologia), Università degli Studi di Firenze, Firenze, Italia.

Psychometric Properties of the Italian Version of the *Brief Calling Scale*

Annamaria Di Fabio¹ and Andrea Svicher²

Abstract

The Brief Calling Scale (BCS) is a widely used 4-item scale developed to assess calling in terms of the presence of calling and search for calling. The present study aims to evaluate the psychometric properties of the Italian version of the BCS in 208 Italian workers. To test the homogeneity of the two sub-scales (presence of calling and search for calling), item response theory (IRT) Mokken analysis was run. Loevinger's coefficient of scalability was calculated at the item level and for the total scores. Reliability was assessed via Cronbach's alphas. Concurrent validity was tested via correlations with the Calling and Vocational Questionnaire (CVQ). The Brief Calling Scale showed excellent Loevinger's coefficients for both items and total scores regarding the presence of calling and search for calling. Cronbach's alphas also displayed excellent values. Concurrent validity with the CVQ was found to be good. The Italian version of the BCS was found to be a highly reliable instrument for assessing calling.

Keywords

Calling, Brief Calling Scale (BCS), Psychometric properties, Workers.

¹ Department of Education, Languages, Intercultures, Literatures and Psychology (Psychology Section), University of Florence, Florence, Italy.

² Resercher in THE-Tuscany Health Ecosystem NextGeneration UE-NRRP, Department of Education, Languages, Intercultures, Literatures and Psychology (Psychology Section), University of Florence, Florence, Italy.

Introduction

According to the most frequently cited definition of calling by Dik and Duffy (2009), calling is «a transcendent summons, experienced as originating beyond the self, to approach a particular life role in a manner oriented toward demonstrating or deriving a sense of purpose or meaningfulness and that holds other-oriented values and goals as primary sources of motivation» (p. 427). This definition comprises three essential components: a) transcendent summons, b) purposeful labour, and c) prosocial orientation.

Additionally, Dik and colleagues (2012) proposed two overarching components of the concept: presence and search both comprising the three essential aspects. In this perspective, some people may already have a calling (i.e., presence), whereas others may not experience a calling in the present and actively seek it (i.e., search). Considering these two different forms of Calling, Dik et al. (2012) advanced the *Brief Calling Scale* (BCS), a highly effective tool for evaluating the degree to which individuals believe they have a calling or are searching for one. Therefore, the BCS is composed of four items: two assess the presence of calling and two the search for calling, providing two global scores for the previously mentioned dimensions. In literature, the presence of a calling has been associated with greater career commitment and maturity, as well as the fact that individuals with reported presence of a calling had higher occupational self-efficacy, work engagement, job satisfaction (Duffy & Dik, 2013; Ehrhardt & Ensher, 2021) and person-job fit (Duffy & Dik, 2013). Research has also shown links between presence of calling and both hedonic and eudaimonic well-being (Dobrow et al., 2019). Perceiving a calling has been positively connected with satisfaction with life (Torrey & Duffy, 2012) and job satisfaction (Douglass, Duffy, & Autin, 2016) as well as showing positive association with meaning in life (Douglass, Duffy, & Autin, 2016) and meaning at work (Duffy et al., 2012) (i.e., eudaimonic well-being). Furthermore, a meta-analysis (Dobrow et al., 2019) confirmed that the presence of a calling is positively associated with a broad range of positive outcomes. The meta-analysis revealed a stronger association between presence of meaning and eudaimonic well-being than those of hedonic well-being, reflecting a more pronounced effect for growth-oriented variables than for more enjoyable types of well-being (Dobrow et al., 2019).

Therefore, calling could be a promising variable for Positive Healthy Organizations (Di Fabio, 2017), a perspective that promotes well-being, meaningfulness, and sustainability as ingredients for developing healthy businesses and healthy workers. Furthermore, indications for research and intervention in the workplaces have encouraged scholars to maintain a balance between effectiveness and cost of actions (i.e., accountability) (Whiston, 2001). In this

regard, short reliable scales could reduce the time and cost of administration, maintaining adequate trustworthiness. Nevertheless, the BCS has not yet been adapted to the Italian context nor its psychometric properties evaluated.

Thus, the aim of the present study is to evaluate the psychometric properties of the Brief Calling Scale (BCS) in adult workers. Homogeneity of the scale was evaluated via Monken analysis, a IRT approach was optimally suited also for the very short scale. Reliability of the BCS was assessed via Cronbach's alpha and Mc Donald's omega. Concurrent validity was investigated with the *Calling and Vocation Questionnaire* (CVQ).

Methods

Participants

The current study included 208 adult workers (Mage = 48.91, SD = 7.36; 41.8% male, 58.2% female) employed in the public and private sector in Tuscany, Central Italy.

Procedure

Participation in the current study was voluntary. The administration order was counterbalanced to control the effects of the order of presentation. Written and informed consent was obtained from participants in accordance with Italian privacy legislation (Law Decree DL 196/2003) and the EU General Data Protection Regulation (EU 2016/679).

Measures

Brief Calling Scale (BCS) (Dik et al., 2012) - *Italian version* (by Di Fabio & Svicher). The BCS is a four-item scale rated on a five-point Likert scale that provides two total summed scores for Presence of calling and Search for calling. The psychometric properties of the scale were examined in the current study. The Italian version of the BCS was translated from English into Italian through the back-translation procedure.

Calling and Vocation Questionnaire (CVQ) (Dik et al., 2012) - *Italian version* (Di Fabio & Svicher, 2022) is a 24-item self-report scale measuring the presence and search for calling on a four-point Likert scale, ranging from 1 («Not at all true for me») to 4 («Absolutely true of me»). The Italian version showed the best fit for a two-Bifactor model with six factors: (1) Presence-Transcendent Summons (PTS); (2) Presence-Purposeful Work (PPW); (3) Presence-Prosocial Orientation

(PPO); (4) Search-Transcendent Summons (STS); (5) Search-Purposeful Work (SPW); and (6) Search-Prosocial Orientation (SPO); and two total scores for the Presence of calling factor (CVQ-presence) (i.e., PTS, PPW, and PPO), and the Search for calling factor (CVQ-search) (i.e., STS, SPW, and SPO).

For the current research, the CVQ-presence and CVQ-search were used. Cronbach's alphas were $\alpha = 0.81$ for CVQ-presence and $\alpha = 0.89$ for CVQ-search.

Statistical Analysis

Since the BCS is composed of four items with two dimensions (Presence of Calling and Search for Calling), comprising two items each, the BCS was evaluated via the item response theory Mokken scale analysis. Two analyses were run independently, one for the BCS Presence item and another one for the BCS Search item. Mokken analysis provides Loevinger's coefficient H of scalability for items and total scores. A weak scale is constituted of $3 \leq H < 4$; a medium scale is constituted of $4 \leq H < 5$; a strong scale is composed of $5 \leq H < 10$. Furthermore, reliability of BCS-Presence and BCS-Search was assessed via Cronbach's alphas. Alphas $\geq .70$ were judged adequate. Lastly, concurrent validity of BCS-Presence and BCS-Search with CVQ was assessed through Pearson's correlations. The R Mokken 3.0.6 and Psych 2.3.3 packages were used. R studio 2022.12.0 was used.

Results

Table 1 shows the results of Mokken scale analysis. Both Loevinger's coefficient for the items and total score of BCS Presence showed that the scale was strong, indicating a high level of homogeneity. Similarly, Both Loevinger's coefficient for item and total score of BCS Search was found to be strong, indicating a high level of homogeneity. Moreover, both BCS Presence and BCS Search showed an excellent value of reliability. Correlation between both BCS Presence and CVQ Presence was found to be positive and statistically significant, in addition, correlation between both BCS Search and CVQ Search was found to be positive and statistically significant, confirming a good concurrent validity between CVQ and BCS (Table 2).

Discussion

To the best of our knowledge, the current research is the first study that has investigated the psychometric properties of the Italian version of the BCS. Both

BCS Presence and BCS Search were found with excellent Loevinger's H coefficient, indicating that the two scales were strong, and their total summed scores were sufficient statistics. Trustworthiness of the total scores for BCS Presence and BCS Search was also supported by Cronbach's alphas, which were found to be excellent. Furthermore, BCS Presence showed a statistically significant and positive correlation with CVQ Presence, in addition, BCS Search showed a statistically significant and positive correlation with CVQ Search. It is in line with Dik et al. (2012) and indicated good concurrent validity for the Italian version of the BCS.

The current study is limited by the fact that the psychometric properties of the Italian version of the BCS were only analysed in employees from Central Italy, and thus the results are not representative of the Italian population. However, to the best of our knowledge, the present study is the first to study the psychometric properties of Dik et al.'s (2012) BCS in Italian workers.

Future studies could be conducted to expand the study of the psychometric properties of the BCS in participants other than workers, such as university students and high school students. Subsequent studies could also apply other IRT models to investigate discrimination and difficulties parameters as well as item information functions and test information functions (Embretson & Reise, 2000). However, the BCS Italian version showed good psychometric properties, suggesting its use in research and intervention to measure workers' calling, according to Dik et al.'s (2012) model.

Table 1

Item response theory Mokken scale analysis and Cronbach's alpha of the *Brief Calling Scale* (n = 208)

Item	Hij (SE)	Cronbach's Alpha
BCS Presence Item 1	0.793 (0.045)	-
BCS Presence Item 2	0.791 (0.046)	-
BCS Presence Total Score	0.792 (0.044)	0.86
BCS Search Item 1	0.895 (0.045)	-
BCS Search Item 2	0.896 (0.046)	-
BCS Search Total Score	0.894 (0.044)	0.91

BCS = *Brief Calling Scale*; Hij = Loevinger's coefficient H of scalability.

Table 2

Pearson's Correlation between the *Brief Calling Scale* and the *Calling and Vocation Questionnaire* (n = 208)

Item	CVQ-Presence	CVQ-Search
BCS Presence Total Score	0.67**	0.21
BCS Search Total Score	0.18	0.41**

BCS = *Brief Calling Scale*; CVQ = *Calling and Vocation Questionnaire*. ** $p < 0.01$

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