



A confirmatory factor analysis of the Francis Burnout Inventory: preliminary psychometric support to a replicable two factor model of the Italian version

Giuseppe Crea

Department of Psychology, Pontifical Salesian University, Rome, Italy

ABSTRACT

This study set out to examine the properties of the revised version of the Francis Burnout Inventory (FBI) among Catholic priests and religious sisters in Italy. The psychometric properties of the FBI were examined in two phases. Phase 1 demonstrated the instrument's factorial validity and internal consistency of two derived dimensions (the Scale of Emotional Exhaustion in Ministry and the Satisfaction in Ministry Scale), with a sample of Catholic priests and religious sisters coming from Lazio, a region around Rome in Italy (N = 156). In Phase 2, the FBI dimensionality was cross-validated using confirmatory factor analysis with Catholic priests and religious sisters coming from all over Italy (N = 287). Alpha and stability coefficients computed with this sample provided further evidence for the FBI's reliability. Implications for work-related health are included.

ARTICLE HISTORY

Received 13 October 2019

Accepted 13 December 2019

KEYWORDS

Religious assessment;
psychometrics; burnout;
religious priests; religious
sisters

Introduction

The burnout syndrome continues to be of interest to and stimulates research in the various occupations where people work for the benefits of others. This syndrome, which is considered a possible outcome of stress in certain specific conditions (Del Rio, 1990, p. 26) indicates “a particular type of reaction to stress which is typical of the so-called helping professions (doctors, nurses, teachers, policemen, lawyers, etc) i.e., professions where the relationship with the patient/client/pupil, etc., plays a leading role together with the work in itself” (Santinello, 1990, p. 47). This syndrome can be conceptualised as a response to job stress produced by the demands of people and is experienced as emotional exhaustion and loss of motivation in the job.

Cherniss (1983) defines burnout “as a process during which a previously engaged professional disengages himself of his work in reply to the stress and tension from his work” (p. 3). Maslach, instead, focuses her attention on the situation (over-involvement, heavy workloads, loss of control) and on the relational and interpersonal factors (emotional effort of empathy, emotions and tensions, negative focusing on problems), while also underlining the importance of personal characteristics (Maslach, 1982, p. 20). Subsequent research identified the three distinct characteristics that could explain the burnout syndrome in the helping professions: emotional exhaustion, that refers to the

feeling of having depleted emotional resources; depersonalisation, as a negative, impersonal attitude, and a sense of emotional distance from people with whom one works; diminished sense of personal accomplishment as a feeling of incompetence in the work (Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001). Despite the differences displayed by the various authors, there is a general agreement that burnout is a multidimensional phenomenon which involves personal, organisational and socio-cultural factors.

Burnout affects not only those involved in highly qualified professional occupations but also those who in their helping professions engage in interpersonal relationships with intensity and enduring involvement, like nurses, doctors, psychotherapists, teachers, and social workers (Francescato, Leone, & Traversi, 1993; Maslach & Jackson, 1986; Ronco, Fizzotti, & Crea, 1993). Research in this area has been extended also to those professions which, despite being characterised by emotional intensity, help and support, have different helping features, such as anesthesiologists, physiotherapists, and humanitarian volunteers (Gabassi & Mazzon, 1995).

Interest in understanding the dynamics of burnout among religious priests and sisters has increased over the past decade with a growing realisation that religious professionals may be as vulnerable to the development of burnout as other professional people (Kammer, 1978; Shinn, Rosario, Mørch, & Chestnut, 1984). In this paper, we are concerned with religious priests and sisters belonging to some Catholic religious congregations, who are involved in their work as religious professionals.

Instrument for assessing burnout among clergy

An instrument widely used in burnout research is the Maslach Burnout Inventory (Maslach & Jackson, 1981). According to this model, emotional exhaustion leads to depersonalisation, and depersonalisation leads to the loss of a sense of personal fulfilment (Maslach & Jackson, 1986). More recently a different way of conceptualising burnout has been formulated, more responsive to the dimensions characterising the work of the clergy, having however some points in common with the vision of burnout according to the Maslach model (Randall, 2013). This new model proposed by Francis, Kaldor, Robbins, and Castle (2005) is based on the notion of “balanced affect” by Bradburn (1969), according to which positive affect and negative affect (both of which contribute to the well-being of the individual) are not opposite polarities of a single continuum, but two independent continua.

In terms of pastoral work experience, Francis et al. (2005) have translated negative affect into emotional exhaustion in ministry and positive affect into ministry satisfaction. These two dimensions were operationalised in a measurement tool (the Francis Burnout Inventory; FBI), consisting of two scales of 11 items each: scale of emotional exhaustion in the ministry (Emotional Exhaustion in Ministry Scale; SEEM) and scale of satisfaction in the ministry (Satisfaction in Ministry Scale; SIMS). The FBI has been included in a number of studies concerning clergy work-related psychological health, including Francis, Robbins, and Wulff (2008), Francis, Robbins, Kaldor, and Castle (2009), Francis, Village, Robbins, and Wulff (2011); Francis, Gubb, and Robbins (2012); Francis, Robbins, and Wulff (2013a, 2013b), Robbins and Francis (2014), Francis, Laycock, and Brewster (2015), Sterland (2015), and Durkee-Lloyd (2016). Recently, the

FBI has been included in the context of priests and nuns in Italy, and its reliability has been verified (Francis, Crea, & Laycock, 2017).

A recent study conducted in Italy developed and tested an Italian version of the FBI (Francis, Crea, & Laycock, 2019), in which the two 11-item scales proposed by the original instrument were each reduced by one item in order to generate a better two-factor solution. The remaining 20 items represented all portions of the conceptual model of Francis et al. (2005).

Against this background, the aim of the present study was to extend the psychometric work conducted on the FBI. In particular, the dimensionality of the Italian version of FBI was first explored with one sample of priests and sisters. Second, to cross-validate the FBI's dimensionality, a confirmatory factor analysis was conducted with different samples of priests and sisters. The following questions guided our research:

- Research Question 1: Does the FBI demonstrate factorial validity?
- Research Question 2: Are the derived factors internally consistent and stable?
- Research Question 3: Is the FBI's dimensionality confirmed with a cross-validation sample?

Method

Procedure

The data were collected during courses operated in Rome and in different parts of Italy for Catholic priests and religious sisters, who were broadly engaged in religious ministry within the community, on the topic of personality and spirituality. Participation in the programme was voluntary and responses to the questionnaire were confidential and anonymous.

Self-report FBI (Italian version) data ($N = 443$) were purposely collected in two different times and from different parts of Italy: the first group of religious priests and sisters from the region of Lazio in the centre of Italy ($N = 156$), and the second group of religious priests and sisters from all over Italy ($N = 287$).

Measure

The Italian version of the FBI proposed by Francis, Crea, and Laycock (2019) comprised two 10-item measures: (1) the SEEM and (2) the SIMS. Responses are made on a 5-point Likert scale ranging from agree strongly (5) to disagree strongly (1). In the foundation study employing data from 6680 clergy in Australia, England and New Zealand, Francis et al. (2005) found high reliability for both scales (.84). Also for the Italian version of the FBI Francis, Crea, and Laycock (2019) reported good internal consistency reliability, with an alpha coefficient of .78 for SEEM and .84 for SIMS.

Participants

In the first group, full data were provided by 156 participants (61 women and 95 men). The mean age of the 61 religious sisters was 50.6 years ($SD = 13.5$), with a range between 24

and 74. The mean age of the 95 priests was 55.8 years ($SD = 15.0$) with a range between 27 and 86. Of the total participants, 33 were non-graduates and 123 were graduates, among whom 20 held doctoral level qualifications.

In the second group, full data were provided by 287 participants, 130 were males and 157 were females. The mean age of the religious priests was 45.3 ($SD = 8.94$), with a range between 22 and 68. The mean age of religious sisters was 54.7 ($SD = 11.74$), with a range between 22 and 77. Of the total participants, 58 were non-graduates and 217 were graduates, among whom 10 held doctoral level qualifications; 12 did not disclose their qualification.

Statistical analyses

Given that exploratory factor analysis (EFA) is a valuable heuristic strategy to model specification before cross-validating the derived factor structure with confirmatory factor analysis (Gerbing & Hamilton, 2009), an EFA was first conducted on the first sample of priests and religious sisters (from Lazio). EFA is especially well-suited for determining potential latent constructs in the data set and provides a more accurate estimate of the item correlations. Based on parallel analysis, the magnitude of factor eigenvalues, percentage of variance explained by each factor, and scree plot results, the appropriate number of factors was rotated to achieve simple structure.

Following guidelines discussed in pertinent articles related to structural equation modelling and assessing measurement models (Schreiber, Nora, Stage, Barlow, & King, 2006; Weston & Gore, 2006), a first-order CFA was conducted using Mplus program (version 7) examining factorial validity of FBI. CFA tests whether indicators load on specific latent variables as hypothesised in the a priori or prespecified model. In other words, using model goodness of fit indices (Marsh, Hau, & Grayson, 2005), CFA examines how well the proposed factor model explains the observed pattern of sample correlations or covariances in a different sample.

Results

Phase 1: exploratory factor analysis

In order to determine the FBI dimensionality (Research Question 1), an exploratory factor analysis was conducted using data from the first sample of religious priest and sisters data ($N = 156$). Prior to this analysis, trends related to outliers were examined, to check the normal trend of the data. Outlier analysis was conducted, finding only minor issues with a few items. The 20-item FBI item means varied approximately from 1.59 to 4.17 (grand $M = 3.21$). Skewness and kurtosis estimates were within an acceptable range (within ± 1.0). The suitability of the intercorrelation matrix for factor analysis was demonstrated by low-to-moderately high inter-item correlations (.18 to .76), a strong KMO (.90), and a significant Bartlett's test of sphericity ($\chi^2[190] = 1,377,696$, $p < .001$). An initial EFA was computed, extracting four factors with eigenvalues greater than 1.0, accounting for 36.01% of the variance in the intercorrelation matrix. Unrotated eigenvalues were as follows: $\lambda_1 = 7.22$ (36.10%), $\lambda_2 = 2.39$ (11.92%), $\lambda_3 = 1.20$ (6.02%), and $\lambda_4 = 1.05$ (5.24%).

After reviewing the scree plot, initial loading plots, percentage of variance accounted for by each extracted factor, a two-factor model seemed most parsimonious. Assuming that these potential dimensions were at least modestly intercorrelated, two factors were obliquely rotated. Post-rotation eigenvalues for these two factors were as follows: $\lambda_1 = 7.22$ (36.10%), $\lambda_2 = 2.39$ (11.92%). The resulting two factors had eigenvalues greater than 2.0. Simple structure was achieved with 20 items comprising two latent dimensions (see Table 1).

The 10 items (scores range from 1.6 to 2.5) comprising the first factor were seen to reflect a low condition of emotional exhaustion in ministry. The 10 items (scores range from 3.8 to 4.2) comprising the second factor were seen to reflect a high sense of satisfaction in the ministry. This confirmatory result meant that we were justified in labelling them the SEEM, and the SIMS respectively, as in the original version (Francis et al., 2005).

Phase 1: reliability analysis

To respond to Research Question 2, reliability estimates for the derived factors were examined. The 20 item means and standard deviations were largely similar and item kurtosis and skewness indices were within an acceptable range (less than ± 1.0 ; see Table 2). Factor scores as well as reliability estimates for the two derived factors were calculated. The Cronbach alpha coefficients for the two factors were as follows: SEEM, $\alpha = .84$ (10 items); SIMS, $\alpha = .89$ (10 items). The magnitudes of the alpha coefficients were largely satisfactory.

Subsequently, to cross-validate the derived factor structure with another religious sample, a CFA was computed with a group of Catholic priests and religious sisters from all over Italy.

Table 1. 20 item EFA structure matrix (Varimax) for Lazio sample.

FBI items	Factor	
	SEEM	SIMS
I feel drained by fulfilling my ministry roles	.38	
Fatigue and irritation are part of my daily experience	.59	
I am invaded by sadness I can't explain	.72	
I am feeling negative or cynical about the people with whom I work	.73	
My humour has a cynical and biting tone	.75	
I find myself spending less and less time with those among whom I minister	.64	
I have been discouraged by the lack of personal support for me here	.44	
I find myself frustrated in my attempts to accomplish tasks important to me	.61	
I am less patient with those among whom I minister than I used to be	.62	
I am becoming less flexible in my dealings with those among whom I minister	.65	
Alpha coefficient / % of variance	.84	36%
I have accomplished many worthwhile things in my current ministry		.70
I gain a lot of personal satisfaction from working with people in my current ministry		.69
I deal very effectively with the problems of the people in my current ministry		.33
I feel very positive about my current ministry		.79
I feel that my pastoral ministry has a positive influence on people's lives		.66
I feel that my teaching ministry has a positive influence on people's faith		.56
I feel that my ministry is really appreciated by people		.63
I am really glad that I entered the ministry		.76
The ministry here gives real purpose and meaning to my life		.82
I gain a lot of personal satisfaction from fulfilling my ministry roles		.83
Alpha coefficient/% of variance	.89	12%

Note: Factor loadings less than .30 suppressed.

Table 2. Two-factor 20 items FBI Descriptive statistics for Lazio ($n = 156$) and all over Italy ($n = 257$) samples.

(EFA)	Lazio Sample M	All over Italy (SD)	Skew	Kurtosis	M	(SD)	Skew	Kurtosis
SEEM								
FBI_1	2.39	1.06	.52	−.51	2.36	1.09	.55	−.51
FBI_3	2.44	1.13	.54	−.67	2.62	1.12	.30	−.90
FBI_5	1.66	.92	1.44	1.45	2.11	1.00	.63	−.55
FBI_7	1.59	.80	1.56	2.70	1.91	.99	1.09	.66
FBI_9	1.61	.80	1.21	.82	1.91	.87	.79	.35
FBI_11	1.90	.94	1.04	.54	2.13	.97	.75	.18
FBI_13	2.53	1.12	.26	−.86	2.72	1.05	.26	−.68
FBI_15	2.16	.96	.60	−.31	2.30	1.07	.57	−.44
FBI_17	2.39	1.05	.55	−.34	2.39	.98	.45	−.64
FBI_19	1.79	1.00	1.52	2.24	2.40	.98	.37	−.77
SIM								
FBI_2	3.96	.74	−.80	1.53	3.73	.80	−.58	.49
FBI_4	3.94	.82	−.86	.95	3.88	.85	−1.00	1.47
FBI_6	3.76	.81	−.87	1.22	3.55	.88	−.83	.61
FBI_8	3.92	.91	−.96	1.07	4.00	.76	−.94	1.81
FBI_10	4.17	.72	−1.32	4.26	4.00	.74	−1.24	3.31
FBI_12	4.17	.61	−.46	1.09	3.99	.74	−1.15	3.12
FBI_14	3.85	.82	−.56	.38	3.72	.83	−1.02	1.71
FBI_16	4.09	.90	−1.16	1.64	4.14	.81	−1.24	2.55
FBI_18	4.15	.96	−1.27	1.36	4.26	.77	−1.32	2.91
FBI_20	4.02	.94	−.98	.88	4.10	.82	−.88	.94

Note: SEEM, scale of emotional exhaustion in ministry; SIMS, Satisfaction in Ministry Scale.

Phase 2: confirmatory factor analysis

In an attempt to cross-validate (Research Question 3) the two-factor hypothesised or base-line model (20-item FBI) revealed in Phase 1, a CFA using the maximum likelihood (ML) estimation method was computed on the second group of religious priests and sisters from all over Italy ($N = 287$). ML was selected over other options because it is robust to moderate violations of the normality assumption (Weston & Gore, 2006). The data assumptions related to the CFA were examined using accepted procedures and standards (Weston & Gore, 2006).

Substantial missing data can be problematic when conducting CFA; as such, as a way to double check the impact of this issue on the results, a CFA was first computed on the data set, where the few missing item scores were recoded using item means. The assumption made in this case was that the pattern of missing survey data was largely random, so item means could be substituted.

According to conventional guidelines for assessing model specification, the CFA results produced an adequate but less than optimal fit (Schreiber et al., 2006). Figure 1 shows the specified measurement model with pertinent standardised path coefficients and covariances between variables. Fit indices were chosen a priori to determine whether the particular model tested was a reasonable fit to the data, and included the comparative fit index (CFI; Bentler, 1990), the goodness of fit index (Jöreskog & Sörbom, 1981), the adjusted goodness of fit index (Jöreskog & Sörbom, 1989), the normed fit index (Bentler & Bonett, 1980), and the Tucker–Lewis index (Bentler & Bonett, 1980). Values for these indices tend to range from 0 to 1.0, with larger values (some assert .90 as a lower-bound threshold, while others advocate values of at least .95) interpreted to suggest reasonable model fit (Brown, 2006).

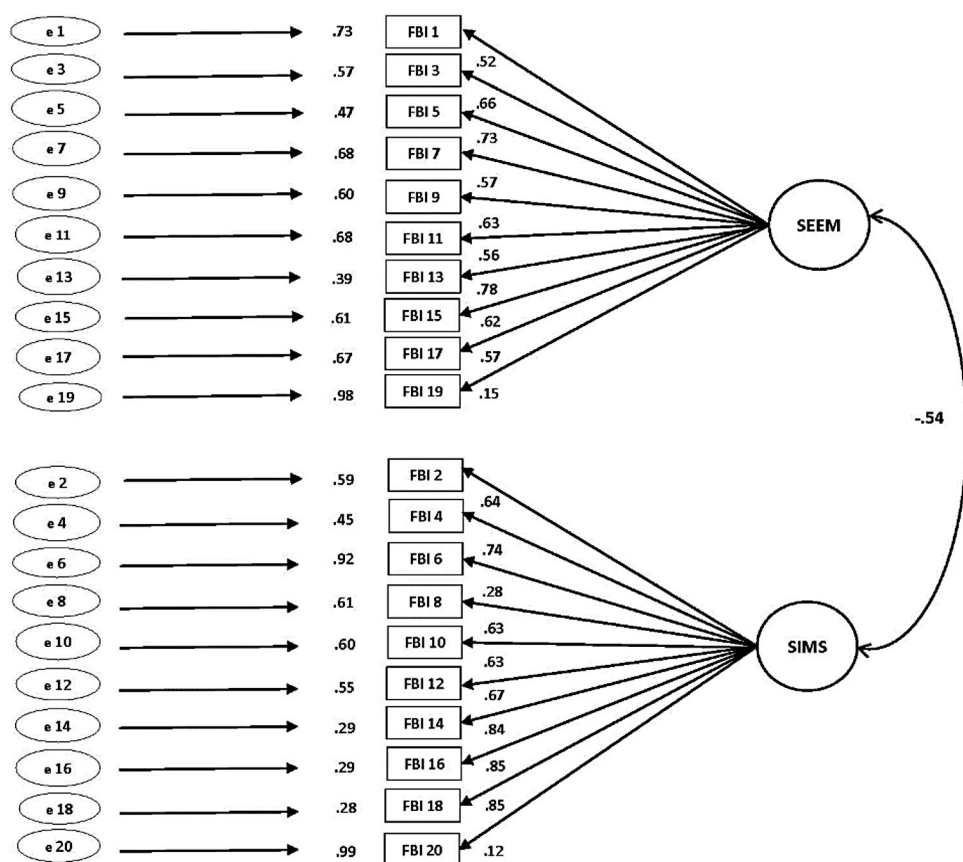


Figure 1. Confirmatory factor analysis path model using all over Italy ($N = 287$) data set (e=error).

Other indices, in which lower values are interpreted as suggestive of reasonable model fit, were calculated and include the root mean square residual (Jöreskog & Sörbom, 1981), the root mean square error of approximation (Steiger, 1990), and the ratio of χ^2 to degrees of freedom (χ^2/df ; Hoelter, 1983). While there is some difference of opinion regarding acceptable values for RMSR and RMSEA, values of .06 and smaller were sought as being suggestive of reasonable model fit based on consultation with multiple sources (Brown, 2006). Smaller χ^2/df ratios (i.e., generally smaller than three and those approaching zero) are suggestive of reasonable model fit, but similar to other fit indices, specific interpretive cut-offs are often a point of debate (Brown, 2006; Hoelter, 1983).

The fit indices for the combined data are presented in Table 3, organised by the proposed models. Based on the aforementioned criteria, χ^2/df , RMSR, and RMSEA values tended to be too high, while GFI, AGFI, CFI, TLI, and NFI values tended to be too low.

Table 3. Confirmatory factor analysis ($N = 287$).

	X2	df	p	CFI	TLI	RMSEA	BIC
FBI	246.531	169	<.001	.88	.86	.08	3.862.533

While many indices of the model are not within the range that would be considered to suggest reasonable fit, it is intriguing that many of the indicators are quite comparable. Ultimately, however, the 20-item, two-factor model (SEEM and SIMS) proposed in the revised version of the FBI stands out as the strongest model, with all indices except TFI, TLI and RMSEA, falling within acceptable standards. χ^2/df may be less of a concern in this case given it is the lowest of all the tested models. This particular indicator is not as widely regarded as it once was given a particular lack of consensus regarding interpretive guidelines, and it also has not experienced the same degree of rigorous empirical study as has some of the other indices, such as RMSEA (Brown, 2006). With regard to RMSEA, which is often further interpreted with a 90% confidence interval (Brown, 2006), although the value itself is slightly high, it is within an acceptable range based on some standards.

Phase 2: reliability analysis

In this second phase, we examined the scale properties of the FBI in terms of the alpha coefficient (Cronbach, 1951). Both scales meet the threshold of acceptability of .65 proposed by DeVellis (2003). They achieved the following alpha coefficients: SEEM .76 (10 items) and SIMS .84 (10 items). It means that the items of the two scales measure well the construct of burnout in this sample.

Discussion and conclusion

The aim of the present study was to extend the psychometric work conducted on the FBI (Francis et al., 2005). In particular, the dimensionality of the Italian version of the FBI was first explored with a sample of 156 religious priests and sisters, and subsequently to cross-validate the dimensionality of the FBI a confirmatory factor analysis was conducted with a second sample of 257 religious priests and sisters. The current study provided sufficient evidence for the factorial validity of the FBI as well as its internal consistency and stability with a large, diverse sample of religious priests and sisters. Two dimensions were found to produce simple structure, each reflecting what previous studies associate with emotional exhaustion in ministry and with satisfaction in ministry (Francis et al., 2008, 2009, 2011). These findings generated further psychometric support for the factorial validity and scale reliability of the FBI, and thus for the questionnaire's overall construct validity, in the sense of demonstrating the relative independence of the two factors concerned with assessing positive affect and with assessing negative affect.

It should be noted, however, that the derived factor structure used as the CFA measurement model generated only adequate comparative fit indices with the "all over Italy" data set. This imprecise replication of the factor structure was not entirely unexpected given the substantial diversity in the more homogeneous nature of the Lazio sample as compared with the more heterogeneous nature of the group of religious priests and sisters coming from all over Italy.

In summary, the data support the psychometric properties of the Italian version of the FBI among religious priests and sisters in Italy. The instrument can be recommended for further use within the Italian context and should contribute to comparative empirical research within the psychology of religion across linguistic communities.

Disclosure statement

No potential conflict of interest was reported by the author.

References

- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107, 238–246. doi:10.1037/0033-2909.107.2.238
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588–606. doi:10.1037/0033-2909.88.3.588
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago, IL: Aldine.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford.
- Cherniss, C. (1983). *La sindrome del burn-out* [The burn-out syndrome]. Torino: Centro Scientifico Torinese.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334. doi:10.1007/BF02310555
- Del Rio, G. (1990). *Stress e lavoro nei servizi. Sintomi, cause e rimedi del burnout* [Stress and work in services. Symptoms, causes and remedies of burnout]. Roma: La Nuova Italia Scientifica.
- DeVellis, R. F. (2003). *Scale development: Theory and applications*. London: Sage.
- Durkee-Lloyd, J. (2016). The relationship between work-related psychological health and psychological type among Canadian Baptist clergy: A research report. *Journal of Empirical Theology*, 29, 201–211. doi:10.1163/15709256-12341343
- Francescato, D., Leone, L., & Traversi, M. (1993). *Oltre la psicoterapia* [Beyond psychotherapy]. Roma: La Nuova Italia Scientifica.
- Francis, L. J., Crea, G., & Laycock, P. (2017). Work-related psychological health among catholic religious in Italy: Testing the balanced affect model. *Journal of Empirical Theology*, 30, 236–252. doi:10.1163/15709256-12341357
- Francis, L. J., Crea, G., & Laycock, P. (2019). Factor structure, reliability and validity of the Francis Burnout Inventory Revised among Catholic priests and religious sisters in Italy. *Mental Health, Religion & Culture*, 18, 593–604. doi:10.1080/13674676.2014.963996
- Francis, L. J., Gubb, S., & Robbins, M. (2012). Work-related psychological health and psychological type among Lead Elders within the New Frontiers network of churches in the United Kingdom. *Journal of Prevention and Intervention in the Community*, 40, 233–245. doi:10.1080/10852352.2012.680422
- Francis, L. J., Kaldor, P., Robbins, M., & Castle, K. (2005). Happy but exhausted? Work-related psychological health among clergy. *Pastoral Sciences*, 24, 101–120.
- Francis, L. J., Laycock, P., & Brewster, C. (2015). The burdens of rural ministry: Identifying and exploring the correlates of five causes of stress among rural Anglican clergy serving in multi-parish benefices. *Research in the Social Scientific Study of Religion*, 26, 218–236. doi:10.1163/9789004299436_015
- Francis, L. J., Robbins, M., Kaldor, K., & Castle, K. (2009). Psychological type and work-related psychological health among clergy in Australia, England and New Zealand. *Journal of Psychology and Christianity*, 28, 200–212.
- Francis, L. J., Robbins, M., & Wulff, K. (2008). The relationship between work-related psychological health and psychological type among clergy serving in the Presbyterian Church (USA). *Journal of Empirical Theology*, 21, 166–182. doi:10.1163/157092508X349854
- Francis, L. J., Robbins, M., & Wulff, K. (2013a). Assessing the effectiveness of support strategies in reducing professional burnout among clergy serving in the Presbyterian Church (USA). *Practical Theology*, 6, 319–331. doi:10.1179/1756073X13Z.00000000021
- Francis, L. J., Robbins, M., & Wulff, K. (2013b). Are clergy serving yoked congregations under greater stress? A study among clergy serving in the Presbyterian Church (USA). *Stress and Health*, 29, 113–116. doi:10.1002/smi.2434
- Francis, L. J., Village, A., Robbins, M., & Wulff, K. (2011). Work-related psychological health among clergy serving in the Presbyterian Church (USA): Testing the idea of balanced affect. *Review of Religious Research*, 53, 9–22. doi:10.1007/s13644-011-0003-8

- Gabassi, P. G., & Mazzon, M. (1995). *Burnout: 1974-1994. Venti anni di ricerche sullo stress degli operatori socio-sanitari* [Burnout: 1974-1994. Twenty years of research on the stress of social and health workers]. Università degli studi di Trieste, Dipartimento di psicologia, Milano: Franco Angeli.
- Gerbing, D. W., & Hamilton, J. G. (2009). Viability of exploratory factor analysis as a precursor to confirmatory factor analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 3, 62–72. doi:10.1080/10705519609540030
- Hoelter, J. W. (1983). The analysis of covariance structures: Goodness of fit indices. *Sociological Methods & Research*, 11, 325–344. doi:10.1177/0049124183011003003
- Jöreskog, K. G., & Sörbom, D. (1981). *LISREL VI: analysis of linear structural relationships by the method of maximum likelihood*. Chicago, IL: National Educational Resources.
- Jöreskog, K. G., & Sörbom, D. (1989). *LISREL 7 User's Reference Guide*. Chicago, IL: Scientific Software.
- Kammer, A. C. (1978). Burnout: A contemporary dilemma for the Jesuit social activist. *Studies in the Spirituality of Jesuits*, 10(1), 1–20.
- Marsh, H. W., Hau, K.-T., & Grayson, D. (2005). Goodness of fit evaluation in structural equation modeling. In A. Maydeu-Olivares & J. McArdle (Eds.), *Contemporary psychometrics. A festschrift for Roderick P. McDonald* (pp. 275–340). Mahwah, NJ: Erlbaum.
- Maslach, C. (1982). *Burnout. The cost of caring*. Englewood Cliffs, NJ: Prentice-Hall.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behaviour*, 2, 99–113. doi:10.1002/job.4030020205
- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422. doi:10.1146/annurev.psych.52.1.397
- Randall, K. (2013). Clergy burnout: Two different measures. *Pastoral Psychology*, 62, 333–341. doi:10.1007/s11089.082.0506-4
- Robbins, M., & Francis, L. J. (2014). Taking responsibility for multiple churches: A study in burnout among Anglican clergywomen in England. *Journal of Empirical Theology*, 27, 261–280. doi:10.1163/15709256-12341310
- Ronco, A., Fizzotti, E., & Crea, G. (1993). Un caso specifico di burnout professionale: Il burnout dei missionari [A specific case of professional burnout: The burnout of the missionaries]. *Orientamenti Pedagogici*, 40, 1087–1116.
- Santinello, M. (1990). *La sindrome del burnout. Aspetti teorici, ricerche e strumenti per la diagnosi dello stress lavorativo nelle professioni di aiuto*. [Burnout syndrome. Theoretical aspects, research and tools for the diagnosis of work stress in the helping professions]. Pordenone: ERIP.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *Journal of Educational Research*, 99, 323–337. doi:10.3200/JOER.99.6.323-338
- Shinn, M., Rosario, M., Mørch, H., & Chestnut, D. E. (1984). Coping with job stress and burnout in the human services. *Journal of Personality and Social Psychology*, 46, 864–876. doi:10.1037/0022-3514.46.4.864
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25, 173–180. doi:10.1207/s15327906mbr2502_4
- Sterland, S. (2015). Workaholism and burnout in Australian church workers. *Research in the Social Scientific Study of Religion*, 26, 250–265. doi:10.1163/9789004299436_017
- Weston, R., & Gore, P. A., Jr. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34, 719–751. doi:10.1177/0011000006286345

Copyright of Mental Health, Religion & Culture is the property of Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.