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# Measure of anxiety in selection interviews: An Italian validation of the Performance Anxiety Scale

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✎ **ABSTRACT.** L'ansia da colloquio di lavoro ha assunto particolare rilevanza negli ultimi anni. Questo studio ha l'obiettivo di proporre l'adattamento italiano della scala di ansia da prestazione nei colloqui di lavoro tratta dal questionario *Measure of Anxiety in Selection Interview (MASI)*. Si tratta di uno strumento breve, composto da sei item. I dati sono stati raccolti da 203 partecipanti con esperienza recente di colloqui di lavoro. I risultati hanno confermato la struttura e l'affidabilità della scala, così come alcune ipotesi sulla sua relazione con altri costrutti e le differenze di genere. L'utilizzo dello strumento nel contesto italiano può avere importanti implicazioni.

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✎ **SUMMARY.** According to McCarthy and Goffin (2004), selection interview anxiety (SIA) is expressed by feelings of nervousness or apprehension that are relatively stable within job applicants across employment interview situations and can be organized into five distinct dimensions. These dimensions constitute the five scales of the Measure of Anxiety in Selection Interview (MASI) questionnaire. The principal aim of this study is to evaluate the Italian adaptation of one of the five scales of the MASI, namely the Performance Anxiety Scale, which is a short and efficient instrument consisting of six items. Data were collected from a convenience sample of 203 participants who reported having recently participated in at least one job interview. Confirmatory factor analysis confirmed the one-factor structure of the Performance Anxiety Scale, which also showed good reliability. Finally, the results confirmed some hypotheses derived from the literature about the scale's relations with other constructs and gender differences.

**Keywords:** Selection interview anxiety, Performance anxiety, Scale adaptation

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## INTRODUCTION

Recently, the Italian labor market has experienced the sharpest decline in the number of employed people since 2004 due to the consequences of the Covid-19 pandemic. In March 2020, the onset of the pandemic caused a reduction of 124,000 employed people (-5%), mainly affecting

temporary employees and the self-employed. In April, the number of unemployed doubled (-274,000, -1.2%), affecting all components of the labor market (ISTAT, 2020). For women and young people in particular, the pandemic has exacerbated some long-standing problems in the Italian labor market, which for years has been characterized by job insecurity due to the increase in precarious forms of

contract and the decline in contract stabilization (ISFOL, 2007). These critical conditions justify the interest, for work psychology in particular, in the mechanisms of job search and selection and in ways to improve performance in these areas. There are elements, which are worth studying, that are capable of enhancing or hindering the job search and the selection process: one of them is selection interview anxiety (SIA).

SIA has been conceptualized by McCarthy and Goffin in 2004 following the principles of the interactional theory, according to which “the employment interview could be perceived as an anxiety-provoking situation, and individual differences in trait anxiety specific to this situation could be assessed” (p. 610). Therefore, SIA is considered as a “situation-specific, or contextualized, trait”. Since there were no other SIA theories, the authors based on theories on general anxiety, test-taking anxiety and interactional anxiety. Test-taking anxiety scientific literature identifies two components in particular: performance anxiety, which means worrying about the test result, and behavioral anxiety, which regards the autonomic arousal connected to test situations (Spielberger & Vagg, 1995). McCarthy and Goffin (2004) also addressed the social characteristics of the job interview situation, using communication, appearance, and social anxiety as portions of SIA construct. Accordingly, SIA has been defined as “feelings of nervousness or apprehension that are relatively stable within job applicants across employment interview situations and can be organized into five distinct dimensions: Communication Anxiety, Appearance Anxiety, Social Anxiety, Performance Anxiety, and Behavioral Anxiety” (p. 616). These dimensions were incorporated in the five scales of a context-specific measure of interview anxiety, the *Measure of Anxiety in Selection Interviews (MASI)*, that was developed and validated by the authors (McCarthy & Goffin, 2004). To evaluate criterion validity of the construct, authors observed the relation between MASI and both self-rated and interview-rated performance: the results suggested that SIA could negatively affect the interview performance. This effect could have important implications on the predictive validity of job interviews (Schmit & Ryan, 1992), leading to hiring the less anxious employees, and not the most qualified.

For these reasons, studying SIA is important and can represent a contribution to the improvement of the selection process. An Italian version of the MASI does not yet exist, although this tool could be a great help to understand and improve selection dynamics.

## Study aims

In particular, the first purpose of this study is to evaluate the property and the structure of the Italian version of one of the scales of the MASI questionnaire, namely the Performance Anxiety Scale. We chose to examine just one scale in order to propose a shorter tool. Moreover, the Performance Anxiety Scale, besides having good psychometric properties ( $\alpha = .83$ ; correlation with the full scale:  $r = .86$ ) according to McCarthy and Goffin’s (2004) study, is the one that relates most strongly to performance during a job interview and therefore could provide direct information about how the applicant experiences the selection situation. In addition, the other four MASI’s dimensions (Communication Anxiety, Appearance Anxiety, Social Anxiety, and Behavioral Anxiety) could be more affected by the pandemic and the resulting restriction, while the performance scale refers exclusively to the situation during the interview.

The second objective of this study is to explore the criterion validity of the scale investigating its relation with some other constructs that resulted correlated to it in the literature (Brown, Hillier & Warren, 2010): job search self-efficacy, job search behaviors, employability, and concern for the future.

## Theoretical background and study hypotheses

Based on our research objectives, our first hypothesis regarded the Italian version of the Performance Anxiety Scale, which, with the other four dimensions, forms the SIA construct. First of all, we expected to confirm the one-factor structure behind the 6-item Performance Anxiety Scale, finding a good internal reliability, according to the results of McCarthy and Goffin (2004) (Hypothesis 1).

Moving to the second study objective, the one concerning criterion validity, we focused on all the variables mentioned above (job search self-efficacy, job search behaviors, employability, and concern for the future) to build our second hypothesis, divided into four sub-hypotheses, described below.

We considered job search self-efficacy in its behavioral dimension, that corresponds to “the belief or confidence that one can successfully perform specific job search behaviors” (Saks, Zikic & Koen, 2015, p. 107). Few studies have

investigated the relationship between SIA and this construct, but some interesting data can be retrieved by the result of the second study described in the 2010 paper by Brown and his colleagues. There, significant negative correlation is reported between a measure of self-efficacy based on job search behaviors and the MASI scale, for what concerns both the full MASI scale and the Performance Anxiety Scale. So, we expected job search self-efficacy to be moderately negatively related to the Performance Anxiety Scale (Hypothesis 2.1).

Job search behaviors followed the conceptualization of van Hooft and colleagues (Van Hooft, Born, Taris & Van der Flier, 2004), from which a scale was derived to measure the intensity of job search behaviors. In Brown and colleagues' 2010 study, job behaviors were positively and significantly correlated with the total MASI scale and the Performance Anxiety Scale. For this reason, we expected job search behaviors to be positively associated with Performance Anxiety Scale (Hypothesis 2.2).

Regarding employability, this research is based on the work of Van der Heijde and Van der Heijden (2006), who addressed employability with a competence-based approach, identifying five dimensions. The one measured in this study is anticipation and optimization. As stated by the authors, this dimension represents acts of creative, proactive, and personal preparation and adaptation to the future, which can reduce periods of unemployment. Thus, employability and SIA have opposite effects, so we can expect a negative relation between these two variables (Hypothesis 2.3).

The fourth variable considered in relation to SIA is concern for the future, a tailor-made scale, created ad hoc for this study to examine whether people are worried about their occupational future given the impact of the pandemic on the labor market. It is possible that the more people are worried about the future, the more anxious they feel, and vice versa. For this reason, SIA is expected to be positively correlated with concern for the future (Hypothesis 2.4).

Finally, in the study by Santos, Arriaga and Simões (2021), the results showed a significant difference between the mean scores of SIA in men (lower scores) and women (higher scores), both in the MASI total scale and in the Performance Anxiety Scale. Our final hypothesis relates to the differences between men and women: according to the literature findings, women should exhibit higher levels of performance anxiety during job interviews (Hypothesis 3).

## METHOD

### Participants

The study included a convenience sample of 203 participants recruited through social networks. Research team members posted the questionnaire on their social profiles and asked their contacts to complete it and share it within each participant's network. All participants indicated that they had recently attended at least one job interview. They provided informed consent and completed a self-report online questionnaire. The voluntary and not paid participation to the research and the anonymity and confidentiality of the data were explained.

Among the participants, 61.8% were females and 37.7% were males. They were aged between 18 and 54 years ( $M = 28.01$ ,  $SD = 8.54$ ). Most of them (60.0%) had a bachelor, master degree or a higher educational qualification. As regards the professional situation, 67.2% were working at the moment they completed the questionnaire, 25.1% were students and 7.7% were unemployed.

### Measures

- *Selection Interview Anxiety* has been considered only for what concerns performance anxiety, that constitutes a scale of the MASI questionnaire (McCarthy & Goffin, 2004). The six items of the scale were translated into Italian, performing multiple back translations, until a good correspondence between the original form and the Italian form was found (see Table 1). The International Test Commission's guidelines (2017) have been followed for the translation procedure of this scale and all the others used for this study: native Italian speakers, who were both experts in the field of Work and Organizational Psychology, checked that cultural references and lexis of the scales were coherent with the Italian context. Some pilot test administrations were carried out with people who speak both Italian and English to identify mistakes and mistranslations. In the Italian translation an inclusive language was used (e.g. "sopraffatto/a; preoccupato/a"). Participants were asked to respond on a 5-points Likert scale (1 = Strongly disagree; 5 = Strongly agree).
- *Job search self-efficacy* has been considered just in its behavioral dimension. In fact, in this research participants

**Table 1** – Italian version of the Performance Anxiety MASI Scale

Original items	Italian translations
1. In job interviews, I get very nervous about whether my performance is good enough.	1. Durante i colloqui di lavoro mi innervosisco molto chiedendomi se la mia performance è sufficientemente buona.
2. I am overwhelmed by thoughts of doing poorly when I am in job interview situations.	2. Sono sopraffatto/a dal pensiero di andare male durante un colloquio di lavoro.
3. I worry that my job interview performance will be lower than that of other applicants.	3. Temo che il mio colloquio di lavoro andrà peggio rispetto a quello degli altri candidati.
4. During a job interview, I am so troubled by thoughts of failing that my performance is reduced.	4. Durante un colloquio di lavoro, sono così turbato/a da pensieri di fallimento che la mia prestazione ne risente.
5. During a job interview, I worry about what will happen if I don't get the job.	5. Durante un colloquio di lavoro, mi preoccupo di cosa succederà se non ottengo il lavoro.
6. While taking a job interview, I worry about whether I am a good candidate for the job.	6. Durante un colloquio di lavoro, sono preoccupato/a di non essere il/la candidato/a adatto/a.

responded only to Job Search Self-Efficacy – Behavior (JSSE-B): one of the two subscales of JSSE questionnaire (Saks et al., 2015). The subscale is originally composed of 10 items, but we excluded item 4 (“Make cold calls that will get you a job interview”), because it does not fit into the Italian job search culture. Again, the items were translated in Italian with the same process described before. Participants responded on a 5-points scale with anchors (1 = Not at all confident; 5 = Totally confident). McDonald’s Omega value was equal to .83.

- *Employability* was measured only in its component of anticipation and optimization, that represents one of the subscales of the tool presented in Van der Heijde and Van der Heijden (2006) paper. Items were translated with the same method used for the other scales. Originally, the subscales had 8 items, but in this research just items from 2 to 5 were used, because the others were repetitions of other items of the questionnaire, or they were not suitable for the Italian context. Respondents had to answer using a 5-points Likert scale (1 = Strongly disagree; 5 = Strongly agree). McDonald’s Omega value was equal to .82.
- *Job search behaviors* were investigated with a scale reformulated by Van Hooft and colleagues (2004), based

on prior findings. Items were translated, in the same way of the other scales, and 3 out of 11 were excluded, due to their unsuitability to the Italian labor market and to the pandemic period. The result was a scale made out of 8 items, with a five-points response scale (1 = I have not devoted time to this activity; 2 = I rarely devoted time to this activity; 3 = Sometimes I devoted time to this activity; 4 = Often I devoted time to this activity; 5 = Very often I devoted time to this activity). McDonald’s Omega value was equal to .64.

- *Concern for the future* was investigated with a scale built ad hoc for this research. The scale has 5-point Likert response scale (1 = Strongly disagree; 5 = Strongly agree) and 4 items. McDonald’s Omega value was equal to .72.

Table 2 shows the results of confirmatory factor analysis (CFA) for each measure, except for Selection Interview Anxiety Scale, which is analyzed in the Results section.

## Statistical analysis

The psychometric characteristics of the CQS were examined through a CFA performed by Mplus 7 to test the psychometric characteristics of the Performance Anxiety

**Table 2** – Confirmatory factor analysis results for the measures job search self-efficacy, employability, job search behaviors and concern for the future

Measures	$\chi^2$	df	p	RMSEA	CFI	TLI	WRMR
Job search self-efficacy	158.96	27	< .001	.08	.92	.90	.90
Employability	4.46	2	.108	.06	.99	.99	.28
Job search behaviors	70.13	20	< .001	.07	.92	.90	.89
Concern for the future	2.24	2	.732	.00	1.00	1.00	.11

*Legenda.* df = degree of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; WRMR = Weighted Root Mean Square Residual.

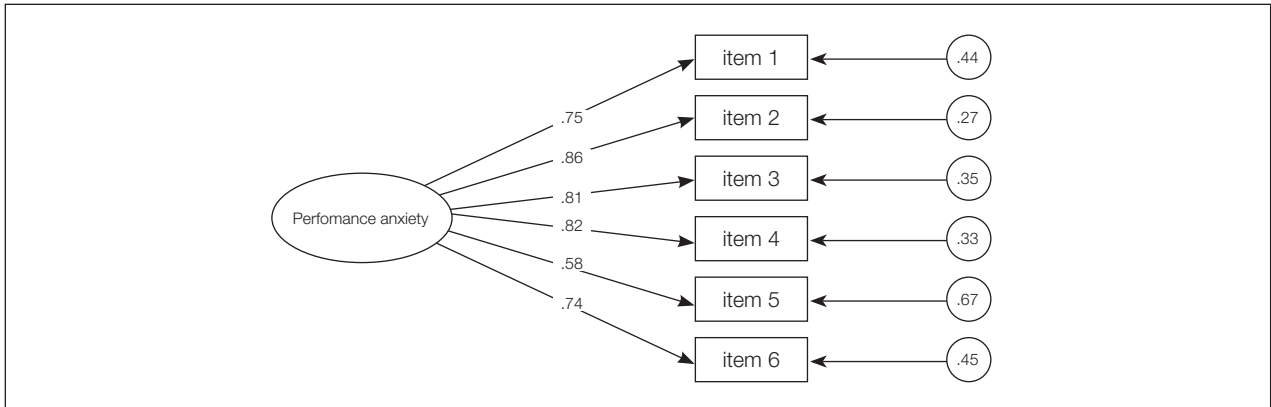
Scale. Since we have a a-priori knowledge of the factor structure of the scale, based on previous research and theory, we decided to conduct a CFA, as suggested by some authors (e.g., Costello & Osborne, 2005) according to which a CFA should be preferred to an exploratory factor analysis for well-established scales. Because the data did not have a normal distribution and the variables were ordinal, we used Weighted Least Square Mean and Variance Adjusted (WLSMV) as method of estimation (Li, 2015). The following have been considered as goodness-of-fit criteria (Bollen & Long, 1993): the  $\chi^2$  goodness-of-fit statistic; the Root Mean Square Error of Approximation (RMSEA); the Comparative Fit Index (CFI); the Tucker-Lewis Index (TLI); the Weighted Root Mean Square Residual (WRMR). Non-significant values of  $\chi^2$  indicate that the hypothesized model fits the data. Values of RMSEA smaller than .05 indicate a good fit, values smaller than .08 indicate an acceptable fit and values greater than 1 should lead to model rejection. CFI and TLI values greater than .90 indicate an acceptable fit, and values greater than .95 indicate a good fit. WRMR values below .90 provided evidence of a good fitting. Following the recommendations of Mundfrom, Shaw and Ke (2005), a sample of more than 200 participants is considered good for the variables-to-factors ratio in our study.

As a measure of reliability, McDonald’s Omega was calculated. Moreover, the criterion validity was tested through correlations between performance anxiety and other constructs indicated in the literature as potentially related to it: job search self-efficacy, employability, job search behaviors, and concern for the future (Brown et al., 2010). Finally, analysis of variance (t-test for independent samples) has been calculated based on gender in order to evaluate the capability of the scale to discriminate among different groups. IBM SPSS 28 was used for all these analyses.

## RESULTS

### Confirmatory factor analysis

CFA was performed on the whole sample and showed a good fit to the data:  $\chi^2_{(9)} = 33.86, p < .001$ ; RMSEA = .07; CFI = .98; TLI = .97; WRMR = .63. Figure 1 shows the standardized solution. Factor loadings ranged between .58 and .86, all exceeding the threshold of .40 recommended for samples of 200 or more (Hair, Black, Babin & Anderson, 2014). Internal consistency was good, with a McDonalds’ Omega value of .86. Hypothesis 1 was thus confirmed.

**Figure 1** – CFA (N = 207): standardized solution

$p < .001$

## Reliability and correlations with other related dimensions

Table 3 shows correlations between Performance Anxiety Scale and other variables. A significant and negative correlation with both job search self-efficacy (Hypothesis 2.1) and employability (Hypothesis 2.3) was found. Moreover, the correlation with job search behaviors (Hypothesis 2.2)

and concern for the future (Hypothesis 2.4) was significant and positive. As for criterion validity, all the hypotheses were confirmed.

Finally, Performance Anxiety Scale showed a positive correlation with female gender and higher levels of performance anxiety were found for women ( $M = 2.43$ ;  $SD = .89$ ) compared to men ( $M = 2.16$ ;  $SD = .08$ ) [ $t_{(194)} = 2.42$ ;  $p = .016$ ]. Hypothesis 3 was also supported by the data.

**Table 3** – Means, standard deviations and correlations

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Performance anxiety	2.33	.83	–					
2. Job search self-efficacy	3.45	.63	–.27**	–				
3. Employability	3.54	.75	–.25**	.39**	–			
4. Job search behaviours	3.49	.58	.20*	.32**	.13	–		
5. Concern for the future	2.98	.86	.26**	–.26**	–.18*	.26**	–	
6. Gender (1 = F)	–	–	.16*	.03	.04	.11	.22**	–

\*  $p < .05$ ; \*\*  $p < .01$

## DISCUSSION AND CONCLUSION

The main objective of this study was to evaluate the characteristics and structure of the Italian version of the Performance Anxiety Scale, one of the five scales of the MASI questionnaire. The results confirmed all research hypotheses, including factorial structure and reliability (Hypothesis 1), relations with other variables (Hypothesis 2), and gender differences (Hypothesis 3).

The one-factor structure of the scale was confirmed by a CFA, which showed a good fit between the model and the data, consistently with the original scale (McCarthy & Goffin, 2004). Moreover, reliability of the construct was confirmed by its good internal consistency.

The second goal of this work was to investigate the criterion validity of the Performance Anxiety Scale through the relations between the scale itself and other variables, namely job search self-efficacy, employability, job search behaviors, and concern for the future. As we expected based on the scientific literature, performance anxiety showed a significant and negative correlation with job search self-efficacy (Brown et al., 2010). This result encourages a reflection on the association between the two variables: further studies could shed light on whether improving job search self-efficacy can reduce performance anxiety in the selection interview or vice versa. As for the relation between performance anxiety and employability, findings showed another significant negative correlation. This is consistent with our hypothesis, based on opposite effects of the anticipation and optimization dimension of employability (Van der Heijde & Van der Heijden, 2006) and the SIA construct (McCarthy & Goffin, 2004) on unemployment. On the contrary, job search behaviors variable demonstrated a positive and significant relation with performance anxiety, confirming this research hypothesis and the results by the work of Brown and colleagues (2010). More in-depth future studies may clarify the direction of the relation, that is, explaining whether it is performance anxiety that stimulates more job search behaviors, or whether performing many job search behaviors is responsible for an increase in the level of performance anxiety. Finally, the last relation explored was also consistent with our hypothesis: the tailor-made scale regarding concern for the future was significantly and positively correlated with performance anxiety in selection interviews. It would be interesting to further investigate the relation between concern and anxiety, especially in the context

of job search and interviews. The results also confirmed the differences in the levels of performance anxiety experienced by men and women: as in Santos and colleagues (2021), women reported significantly higher mean scores. Compared to 2019, in 2020, there was a 4.7 percentage point decrease in the women's employment rate (ISTAT, 2020). Moreover, during the same year, the gender divide in Italy related to the employment rate increased from 17.8 to 18.3 points (ISTAT, 2020). The higher levels of SIA experienced by Italian women could be both a cause or consequence of their more difficult employment situation. Further research is needed to examine these relations.

These findings allow us to consider the Performance Anxiety Scale as a valid brief instrument to study the experience of the selection process, both to deepen the scientific knowledge about it, with the intention of improving selection procedures, and to compensate for at least one of the interview biases that we know about. Indeed, SIA could have a negative impact on interview performance (McCarthy & Goffin, 2004). This could affect the predictive validity of job interviews (Schmit & Ryan, 1992) and lead to hiring the less anxious rather than the most qualified candidates. Therefore, the MASI instrument could be useful in assessing the impact of applicants' SIA on their interview performance.

As for the future development of research, some suggestions have already been made, such as searching for causal relations and deepening the knowledge of relation between concern and anxiety. In addition, only one of the five scales of the MASI was validated in this study because a short instrument was preferable: it may be useful to validate the entire instrument to obtain a more complex and complete view of the phenomenon of SIA.

This research also has some limitations that should be addressed in future studies. First of all, the design of the study was cross-sectional, whereas a longitudinal one would be preferable, especially for studying the reliability of the questionnaire through the test-retest method. Moreover, MASI is a self-report questionnaire, which implies some biases, such as that of acquiescence. To balance this questionnaire feature, next studies should insert in the research design some other-report evaluations, such as those of job interviewers, or some objective measure of anxiety. Besides, study participants indicated that they had recently undergone at least one job interview, but the method by which these interviews were conducted was not asked. Nowadays, job interviews can take place either in person or

online, with the latter becoming increasingly common post-pandemic. Since the type of interview (in-person or remote) could potentially have an impact on the SIA of participants, the lack of investigation of this aspect is a limitation of this study that could be addressed in future research. Finally, the

sample was small and not representative of the population.

In conclusion, even considering these important limitations, the Italian version of the Performance Anxiety Scale of MASI questionnaire can be considered a useful tool to study SIA in Italy.

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