

## HOW DO NEWCOMERS AND FULL MEMBER EMPLOYEES CONCEIVE ORGANIZATIONAL SOCIALIZATION? MEASUREMENT INVARIANCE AND CONSTRUCT VALIDITY OF THE NEWCOMER SOCIALIZATION QUESTIONNAIRE IN ITALY

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The Newcomer Socialization Questionnaire (NSQ; Hauter, Hoff Macan, & Winter, 2003) is an interesting multi-level (organization, group, task) measure of the organizational socialization process. The present study is twofold. First, it aimed to extend previous findings on its validity by examining measurement invariance in two groups: newcomers and full member employees. Second, it examined the construct validity of the Italian version of the NSQ. A first study was conducted to test factorial structure and measurement invariance of the NSQ on two groups: 279 newcomers and 284 full members. A latent means comparison was then performed as a further criterion to assess construct validity. In the second study, construct validity was assessed through the correlation between organizational socialization, job satisfaction, performance, and work-family conflict on 476 employees. Evidence of full measurement invariance was found for the two NSQ subscales related to group and task levels, whereas partial measurement invariance was determined for the subscale related to the organizational level. Findings extended previous validation evidence indicating that a comparison between newcomers and full members on organizational socialization should be interpreted with caution. Moreover, evidence supported the construct validity of the Italian version of the NSQ, which could be adopted in Italy for research and practical purposes. Limitations and suggestions for further research are discussed.

Key words: Newcomers; Organizational socialization; Measurement invariance; Latent means comparison; Construct validity.

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Over the last more than 40 years a considerable body of literature has been devoted to organizational socialization. Although the general theoretical framework for the organizational socialization process is well established, results on specific relationships between variables often report inconsistent findings, due, in particular, to proliferation of variables measures or poor adaptation of already existing measures (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). A first issue concerns the dynamic nature of the socialization process. Although most research focuses on newcomers, this adjustment process is to be monitored in its evolution from the early entry stage to subsequent phases, when newcomers may more or less successfully adapt to the

organizational context, new tasks, and work relations (Ashforth, 2012; Levine & Moreland, 1991). Thus, it is important to base research on measure instruments which are stable in time.

Further, most of the studies have been conducted within organizations in English-speaking countries, providing measures and scales that are not always properly cross-culturally adapted and validated (i.e., Farnese, Bellò, Livi, Barbieri, & Gubbiotti, 2016; Farnese, Barbieri, Bellò, & Bartone, 2017; Hau-Siu Chow, 2002; Livi, Di Santo, Lo Castro, & Lupardini, 2014; Spagnoli, 2016; Taormina & Bauer, 2000). As Bauer, Morrison and Callister (1998) noted, differences associated with national culture may create cross-cultural variance in the socialization process. For instance, in different cultures, organizations may utilize dissimilar socialization tactics, newcomers and insiders may play different roles in the socialization process, and even the definition of successful organization may differ. Thus, it is essential to have reliable measures in different languages and a proper and robust scale adaptation process is recommended as well as more contributions from non-English speaking countries. The most commonly used scales measuring organizational socialization content were developed in English-language countries and mainly tested with English-speaking samples (e.g., Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Haueter, Hoff Macan & Winter, 2003; Taormina, 1994). Because it is desirable to increase the contribution to the literature from non-English speaking countries, including cross-cultural comparison studies, a thorough approach to the adaptation of organizational socialization measures is mandatory.

The present study was designed with the aim to contribute to the validity strengthening and higher stability of a socialization measure. Factorial and construct validity of the Italian version of the Newcomers Socialization Questionnaire (NSQ), proposed by Haueter et al. (2003), was assessed. This is one of the most interesting and comprehensive measures of the organizational socialization content and the only one that explicitly takes into account a multi-level perspective, analysing the socialization process at the task, group, and organizational levels. Given that the socialization construct implies a dynamic evolution, Haueter and colleagues (2003) involved both newcomers and full member employees, controlling for tenure in their NSQ validation analyses. However, they did not verify whether employees in the early stage of socialization and those with more seniority conceived organizational socialization in the same way. For this reason, in the present study we also aimed to test measurement invariance of the scale between two groups of employees: at their initial stage of socialization and as full members. A more extended overview of the organizational socialization process and related measures will follow in the next two Sections.

#### THE ORGANIZATIONAL SOCIALIZATION PROCESS

Organizational socialization is the process by which employees learn about their job, work group, and organization, both acquiring knowledge and skills, and integrating with and being accepted by colleagues (Louis, 1980; van Maanen & Schein, 1979). Although socialization is a continuous process occurring whenever an employee changes his/her role or department, or copes with new job demands, the most critical step is entry in an organization as a newcomer. In this early stage adjustment to the new work context is needed to actively participate and be accepted as an organizational member (Jones, 1983; Moreland & Levine, 2001; van Maanen & Schein, 1979). Newcomers are to cope with uncertainties about the task/role and the new environment and manage the discrepancies between their expectations and the reality they meet; this entry stage is therefore sensitive and can be problematic (Louis, 1980; Saks & Ashforth, 1997).

The organization can also contribute to a successful socialization process, triggering different tactics (e.g., training, mentoring, orientation programs, etc.) aimed to reduce the newcomers' feeling of uncertainty

and ambiguity about their role (Allen, 2006; Farnese et al., 2016; Farnese et al., 2017; Jones, 1986; Klein & Weaver, 2000).

If the sense-making process proves to be effective, it develops positive and lasting outcomes, both for new hires and the organization, enhancing the person-job-organization fit (Cable & Parsons, 2001). To date, the many reviews and meta-analytic studies on the organizational socialization literature agree on the important contribution it exerts in promoting positive effects for both employees and the organization (Bauer et al., 2007; Bauer & Erdogan, 2012; Kammeyer-Mueller & Wanberg, 2003; Klein & Heuser, 2008; Saks, Uggerslev, & Fassina, 2007). Specifically, they have proved that a good socialization process results in learning different content domains that, in turn, lead to proximal outcomes such as a better person-organization fit, stronger feeling of acceptance by insiders, lower role conflict and ambiguity. Socialization also affects further distal outcomes related to employees' job attitudes (organizational commitment, job satisfaction, intention to quit) and behaviours (job performance, career effectiveness, turnover). Thus, the importance of good socialization is widely acknowledged, as well as the need to deeply analyse its relationships with other organizational features.

For instance, literature recognizes that role adjustment occurs at different social levels — task, team-work, unit or department, organization as a whole — so the learning contents that newcomers need to master and the appropriate role behaviours to acquire could be distinctive at different levels (job, work group, organization). Similarly, contextual factors related to each of levels may exert a specific influence on different socialization facets (Klein & Heuser, 2008). However, this perspective has received little empirical attention and only a few studies have examined socialization at multiple levels (e.g., Haueter et al., 2003; Ostroff & Kozlowski, 1992).

#### ORGANIZATIONAL SOCIALIZATION MEASURES

One of the most important outcomes of the organizational socialization research is to find ways enabling newcomers to adjust quickly and effectively into their organizations. However, at the same time, research has applied different indicators to analyze the development of the socialization processes (Bauer & Erdogan, 2012; Cooper-Thomas & Anderson, 2006). In fact, socialization research has often used “proximal” measures, that is, indicators of adjustment to new work positions within organization captured by role clarity, social integration, or task mastery (Bauer et al., 2007; Saks & Ashforth, 1997). Another set of measures often used in the literature include “distal” or “secondary” indicators, capturing socialization outcomes, such as job satisfaction, organizational commitment, performance, and turnover intention (Allen & Meyer, 1990; Chen & Klimoski, 2003; Haueter et al., 2003).

Since the 1990s, consensus has grown around the idea that the better way to measure socialization is considering learning as the core of organizational socialization, that is the employees' understanding of the way their organization functions (Chao, 2012; Cooper-Thomas & Anderson, 2006). Hence, since 1994 at least four models, with associated measures, have been proposed, mainly focusing on organization-workgroup-task learning and social integration (Bauer & Erdogan, 2012).

The most widely used measure of socialization is the Content Area of Socialization (CAS) developed by Chao et al. (1994) with a six-dimensional model of socialization including performance proficiency, politics, language, people, organizational goals/values, and history. In the same year, Taormina (1994) developed a four-domain measure of socialization called Organizational Socialization Inventory covering training, understanding, coworker support, and future prospects (Taormina, 2004). Cooper-Thomas and Anderson

(2002) proposed a four-domain model of organizational socialization comprising role, social, interpersonal resources, and organizational knowledge, named Thomas and Anderson Socialization Questionnaire (TASQ). More recently, a new scale, the Organizational Socialization Questionnaire (OSQ; Livi, Theodorou, Rullo, Cinque, & Alessandri, 2018), was proposed using a three-factor model, namely competence, identification, and social acceptance, tapping both perceived full-membership and the so-called quasi-membership (marginal members or newcomers).

However, one of the most recent measures of organizational socialization is Haueter et al.'s (2003) Newcomer Socialization Questionnaire (NSQ), which aims to address some limitations of the previous measures. The authors, noting the inconsistent inclusion of different levels of analysis within specific dimensions, proposed to clearly consider the learning contents at three levels: organization, group, and task. Furthermore, based on the theoretical work by Schein (1971) and Feldman (1981), Haueter and colleagues claimed that socialization does not only include obtaining knowledge about the organization, work group, and task, but it also requires knowledge about how to behave in these contexts. Thus, the indicators of socialization at the *organizational* level include learning the values, goals, rules, politics, leadership style, and language of the organization. Newcomers are socialized to their *group* when they learn how to function adequately as group members, that is, when they learn how they can contribute to the group's objectives, what is expected from them as group members, and how they can contribute to group goals in accordance with the group procedures (Feldman, 1981). Finally, *task* socialization includes learning how to perform expected task behaviors, how to interact with others, their responsibilities, which task is to be given priority, and where they can obtain the necessary resources to perform the task (Haueter et al., 2003).

The validation of the NSQ conducted by Haueter and colleagues (2003) examined its factorial validity in two steps. First, exploratory factor analysis was conducted on a sample of full member employees. Second, confirmatory factor analysis was carried out on a sample of newcomers. However, measurement invariance including these two samples was not examined, thus leaving unexplored whether employees at different stages of socialization perceive the socialization components in similar ways. Given that socialization is a dynamic construct, implying a development during work life, and that therefore research on this topic often includes both newcomers and full members or longitudinal designs, understanding whether newcomers and full members refer to organizational socialization in the same way is critical. The measurement invariance test provides information on the possibility that the scale operates in exactly the same way and that the construct has the same theoretical structure and psychological meaning across the groups (Byrne, 2004).

Thus, this paper first aimed to extend previous validation of the scale by testing the equivalence of the scale on two groups of participants — newcomers and full member employees — through measurement invariance. Second, it aimed to examine the factorial and construct validity of the Italian version of the NSQ.

Two different studies were conducted to accomplish these two aims. In the first study, we examined factorial validity and measurement invariance of the NSQ, comparing a group of newcomers and a group of full members.

In the second study, we assessed the NSQ construct validity through the examination of convergent and discriminant validity. Specifically, convergent validity was verified analyzing the relationships between NSQ and two distal outcomes of the organizational socialization process: job satisfaction and performance. In fact, according to the theory of work adjustment (TWA; Swanson & Schneider, 2013), individual satisfaction and performance might be greatly influenced by the degree of person-organization fit experienced by the new employees. Further, in line with the uncertainty reduction theory (URT; Lester, 1987), individual satisfaction might be influenced by removing some of the uncertainty of a new environment by gathering information that guides employees' behavior. Drawing on these theoretical frameworks and empirical

evidence of a positive relationship between organizational socialization and each of these outcomes extensively provided by the literature (e.g., Cooper-Thomas & Anderson, 2002; Haueter et al., 2003; Reio & Wiswell, 2000; Spagnoli, 2017), we specifically hypothesised that:

H1: A positive relationship between NSQ dimensions and job satisfaction exists.

H2: A positive relationship between NSQ dimensions and performance exists.

Discriminant validity was assessed through the examination of the relationship between NSQ and work-family conflict, “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). Nowadays the interplay between work and family domains constitutes one of the most relevant topics to be studied in the organizational psychology and human resource management fields (Greenhaus, Collins, & Shaw, 2003). However, the level of learning on different content domains acquired during the organizational socialization process appears not to be directly connected to the mechanism triggering work-family conflict, which, for example, can originate from specific work and family role demands (Greenhaus & Beutell, 1985) or poor organizational work-family culture (Lo Presti, Spagnoli, Ghislieri, & Pluviano, 2017; Thompson, Beauvais, & Lyness, 1999). Thus, the third hypothesis of the current study is:

H3: A nonsignificant relationship between NSQ dimensions and work-family conflict exists.

Moreover, NSQ scores between newcomers and full members included in the first study were compared as a further criterion for examining construct validity. Given that newcomers had up to one-year tenure, whereas full members' tenure was comprised between two and forty years, we assume that full member employees should have better knowledge of their organization, work group, and task. Thus, we formulated the following fourth hypothesis:

H4: Newcomers' NSQ mean scores will be statistically lower than those of the full members.

## STUDY 1

### Sample

A total of 563 participants took part in Study 1 composed of two different groups: 279 newcomers (49.7%), and 284 full member employees (50.3%). In this study, the status of newcomer was assigned to those employees who had an organizational tenure lower than a year, whereas the status of full member was assigned to those employees whose tenure was equal to or longer than two years. The literature in this field often reports the time lag of the socialization process lasting from a few months to more than a year for the newcomer to become an effective member (e.g., Feldman, 1977; Bauer et al., 1998). Specifically, the time lag of the organizational socialization process may vary coherently to the specific organizational context and kind of job. Because in the current study we had a heterogeneous group of participants, and could not infer about the impact of the organizational context, we decided to set the length of the status of newcomer to one year. Moreover, to clearly differentiate the two groups, we considered as comparison group employees who were at least two-year tenured.<sup>1</sup>

In Study 1 newcomers were 186 males (66.7%) and 93 females (33.3%), aged between 18 and 60 ( $M = 28.69$ ,  $SD = 7.37$ ). Most of them had a permanent job (67.7%) and worked in the services sector (91%). Full members were 152 males (53.5%) and 132 females (46.5%), aged between 21 and 64 ( $M = 44.05$ ,  $SD = 10.89$ ). Most of them had a permanent job (82.4%). They worked in the services sector (82%), in industry (14%), and agriculture (2.2%). A few did not specify their job sector (1.8%).

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## Procedure

A rigorous translation process was used to ensure equivalence of meaning between the Italian and the English versions of the NSQ. This included forward and backward translation, and pilot testing. The process began with the translation of the English version into Italian by a bilingual translator; then, a native English translator independently translated the NSQ back into English. The translators then compared the back translation to assess item-by-item consistency. Before applying the NSQ, a pilot test was conducted to obtain feedback on the readability and content validity of the translated scale. This instrument was applied to 10 individuals, and no significant word changes were made. The Italian version of the NSQ is available from the corresponding author.

Data were collected through an anonymous questionnaire, administered by hand delivery and return through both the snowball technique and a research project involving the human resource management staff of the organizations. The snowball technique involved graduate students who voluntarily took part in the data-collecting phase after a training session. They administered a limited number of questionnaires. All participants were informed of the anonymity and confidentiality of the survey. Two questionnaires were discarded due to the high number of missing values.

## Measures

*Newcomer Socialization Questionnaire.* The NSQ is constituted of three subscales, related to different levels of analysis: the NSQ-O, on socialization relating to the organization (12 items); the NSQ-G, on socialization relating to the work group (12 items); the NSQ-T, on socialization relating to the work task (11 items). Respondents were asked to specify their knowledge in each level. Example items for NSQ-O are: “History of this organization,” “Policies and/or rules,” “How my job contributes to the organization.” Example items for NSQ-G are: “Names of the members,” “Group’s objectives,” “Perform tasks to the group’s standards.” Example items of the NSQ-T are: “Priority,” “Tools,” “Meet customer’s need.” The data used in this study were obtained from two different wider studies on organizational socialization. Given that in one of these studies the Likert scale used for measuring the NSQ was analogous to that of the original validation study of Haueter et al.’s (2003) from 1 = *strongly disagree* to 7 = *strongly agree*, whereas in the other study the Likert scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*, a preliminary transformation of the variable scores in z-scores and, subsequently, in t-scores, was needed to properly manage the database, and as a pre-condition for running structural equation modeling.

## Data Analyses

The factorial and construct validity of the Italian version of the NSQ were examined by testing its measurement invariance —configural, metric, and scalar invariance (e.g., Byrne, 2004; Davidov, 2008) — on the two groups of participants: newcomers and full member employees. The comparison of the NSQ latent means scores between the two groups was then examined as a further criterion for testing construct validity.

Configural invariance was assessed in two stages. In the first, we tested the dimensional structure of the NSQ by conducting a confirmatory factor analysis (CFA), using the maximum likelihood method, on the overall sample.<sup>2</sup> CFA represents a kind of structural equation modeling that deals specifically with

measurement models. The aim of this analysis is to examine the relationship between observed measures and latent variables or factors. In the second stage, multi-group confirmatory factor analysis (MCFA) was carried out in order to assess configural and measurement invariance. MCFA consists of simultaneous CFAs in two or more groups, offering a strong analytic framework for evaluating the equivalence of measurement models across distinct groups (Brown & Moore, 2012). Configural invariance is achieved when the model holds in all the groups included in the analysis. The indices of fit for testing the dimensionality and configural invariance of the Italian version of the NSQ were the following: the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the normed chi-square ( $\chi^2/df$ ). CFI assesses the extent to which the tested model is superior to an alternative model in reproducing the observed covariance matrix (Bentler, 1990; McDonald & Marsh, 1990). The CFI index varies from 0 to 1 and a cut-off criterion of  $CFI > .90$  is needed to ensure that mis-specified models are not accepted (Hooper, Coughlan, & Mullen, 2008). The RMSEA introduces a correction for lack of parsimony, because, all other things being equal, more complex models are penalized. A cut-off value close to .06 (Hu & Bentler, 1999) or a stringent upper limit of .08 (Steiger, 2007) seem to be the consensus among researchers. The normed chi-square, or the chi-square to degrees of freedom ratio ( $\chi^2/df$ ), is a further version of the traditional chi-square, with the advantage of possibly being less sensitive to the sample size. Schumacker and Lomax (2004) suggest that a normed chi-square lower than 5 indicates a good fit.

Metric and scalar invariance analyses were conducted on the three subscales of the NSQ to test if the factor loadings and the intercepts were the same in the two groups of participants. In order to test full metric invariance, the fit of a constrained model, including all the fixed factor loadings, is compared to the fit of the free-to-vary model. Following Chen (2007) and Cheung and Rensvold (2002), CFI and RMSEA were also used to test metric and scalar invariance. The cut-off points for rejection of metric and scalar invariance are established as an increase of RMSEA by .015 and a decrease of CFI by .010 (Chen, 2007; Cheung & Rensvold, 2002). If the fit difference between the models falls into the threshold for rejecting the full metric invariance, partial metric invariance could still be explored (Byrne, Shavelson, & Muthén, 1989; Millsap & Meredith, 2007), leaving at least two fixed factor loadings in a construct, or in one factor when a construct is composed by several factors. Once that at least partial metric invariance has been established, in order to compare the factors' means of the different samples, it is important to explore whether the scores from different groups have the same origin, namely, whether the intercepts across the group are the same (scalar invariance). As to factor loadings, in order to achieve at least partial scalar invariance, the intercepts non-invariance can be explored by relaxing constraints on the intercepts one by one (Byrne et al., 1989; Millsap & Meredith, 2007).

Thus, to further support the construct validity, the examination of newcomers' and full member employees' scores on the three subscales of the NSQ was carried out through latent means comparison. AMOS 20 was used to run CFA and MCFA, whereas SPSS 20 was used for data managing, preliminary analyses of the data (such as computation of *z*-scores and *t*-scores), correlational analyses, reliability analyses, and ANOVA one-way analyses.

## Results

Data managing consisted preliminarily in transforming the variable scores into *z*-scores and, subsequently, *t*-scores. Next, CFA and MCFA were conducted using the maximum likelihood estimation method to test factorial validity, configural, and measurement invariance.

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### *Factorial Validity*

Firstly, CFA was carried out on the overall sample ( $n = 563$ ) to test the fit of the model for each of the three one-factor subscales. As in the original validation study reported by Haueter and colleagues (2003), residuals between highly similar items (modification index  $> 15$ ) were allowed to covary (Kline, 1998). This resulted in three (of the 54 possible) correlated residuals in the NSQ-O subscale, seven (of the 54 possible) correlated residuals in the NSQ-G subscale, and three (of the 44 possible) correlated residuals in the NSQ-T subscale. Then, the fit of the model simultaneously including the three subscales was assessed. Table 1 provides a summary of the model fit results. Each of the CFA models fit the data very well. In fact, all the CFI values were very close to 1, ranging from .96 to .91; the  $\chi^2/df$  were all below the threshold; the RMSEA were all below or equal to the threshold of acceptance of .08. Factor loadings for the three subscales are presented in Table 2. In sum, they were all statistically significant ranging from .48 to .81. Thus, all in all, the dimensional structure of each of the three NSQ one-factor subscales was found to be comparable to that of the original scale of Haueter et al.'s (2003). Moreover, the fit indices of the model testing the complete NSQ, correlating the three subscales, were satisfactory, indicating that the scale could be used as an instrument.

Before testing configural invariance, according to Byrne's (2004) suggested precondition, the fit of the models was tested separately for newcomers and full member employees. Results are showed in Table 1. Although indicating some fit indexes to be out of the threshold of acceptance, they reported acceptable fit of the models for each group. Especially, CFI values were all greater than .90, similarly to those reported by Haueter et al. (2003). RMSEA values were in a few cases slightly above the threshold of acceptance, however the comparison between the current study and Haueter et al.'s was not possible, given that they did not include RMSEA values. Finally,  $\chi^2/df$  was in the threshold of acceptance.

### *Reliability*

Next, reliability and correlational analyses were conducted. Evidence of the reliability analyses on the overall sample indicated an excellent internal consistency of each of the three NSQ subscales. In particular, Cronbach's  $\alpha$ s for the three subscales were the following: NSQ-O  $\alpha = .90$ ; NSQ-G  $\alpha = .92$ ; NSQ-T  $\alpha = .90$ . These reliability coefficients were even better than those of the original version by Haueter et al. (2003) — .88, .92, and .89, respectively. As expected, the results of the correlational analysis indicated a high association among the three NSQ subscales. Specifically, the bivariate correlational coefficient between NSQ-O and NSQ-G was  $r = .72$ ; between NSQ-O and NSQ-T was  $r = .65$ ; between NSQ-G and NSQ-T was  $r = .74$ . All the correlational coefficients were statistically significant at  $p < .001$ . The results are in line with those of the original validation (Haueter et al., 2003) — .69, .64, and .70, respectively.

### *Measurement Invariance*

Subsequently, a MCFA was conducted to test the configural invariance of the dimensional structure. The fit of the model for each one-factor subscale was examined simultaneously on the two subsamples, composed by newcomers and full member employees. Table 1 shows the results obtained from the MCFA. In brief, results of the MCFA showed that all the fit indices were satisfactory. In particular, the CFIs were satisfactory, ranging from .926 to .951; the  $\chi^2/dfs$  were all below 5, ranging from 2.681 to 3.730; the RMSEAs

were all below the threshold of acceptance of .08, ranging from .055 to .063. Thus, the dimensional structure of the three one-factor subscales held on the two groups included in the study. Therefore, configural invariance was achieved.

TABLE 1  
 Fit indices for CFA and MCFA in the three NSQ subscales

NSQ subscales	CFI	RMSEA	$\chi^2/df$
<i>Overall</i>			
NSQ	.910	.057	2.829
Organization	.946	.074	4.107
Group	.951	.084	4.988
Task	.963	.067	3.534
<i>Newcomers</i>			
Organization	.960	.063	2.106
Group	.934	.102	3.883
Task	.942	.087	3.128
<i>Full members</i>			
Organization	.900	.108	4.308
Group	.947	.087	3.128
Task	.953	.081	4.523
<i>Multigroup - Configural invariance</i>			
Organization	.926	.063	3.207
Group	.940	.055	2.681
Task	.951	.059	3.730
<i>Metric and scalar invariance</i>			
Organization	.904	.065	Metric full
Organization	.913	.062	Metric partial
Organization	.917	.059	Scalar full
Group	.930	.065	Metric full
Group	.923	.065	Scalar full
Task	.943	.052	Metric full
Task	.941	.052	Scalar full

Note: CFI = comparative fit index; RMSEA = root mean square error of approximation.

The next step to test measurement invariance consisted of testing metric and scalar invariance. Specifically, the examination of full metric invariance consists of comparing the free-to-vary model to a constrained model, where all the factor loadings are fixed. Results showed in Table 1 indicated that the differences between the CFIs of the free-to-vary models and of the constrained models for NSQ-O ( $\Delta CFI = .022$ ) did not fall into the threshold of acceptance of .01, whereas it fell into the threshold for NSQ-T ( $\Delta CFI = .008$ ) and NSQ-G ( $\Delta CFI = .01$ ). The RMSEA difference values fell into the threshold of acceptance of .015 for NSQ-O ( $\Delta RMSEA = .001$ ), NSQ-T ( $\Delta RMSEA = .003$ ), and for NSQ-G ( $\Delta RMSEA = .002$ ). Thus, full metric

TABLE 2  
 Factor loadings for the three NSQ subscales

NSQ subscales	NSQ_O	NSQ_G	NSQ_T
1. Specific names of the products/services	.61		
2. History of this organization	.48		
3. Structure	.62		
4. Operations*	.78		
5. Objectives and goals*	.77		
6. How departments or subsidiaries contribute	.74		
7. How my job contributes to the organization	.68		
8. How to act to fit with values and beliefs	.73		
9. Policies and/or rules	.66		
10. Internal politics	.56		
11. Management style	.62		
12. Language	.57		
1. Group contributes to organization's goal		.71	
2. Group's objectives		.74	
3. Group and other groups		.71	
4. Expertise each member		.67	
5. Member's output contributes products/services		.67	
6. Supervisor expects		.61	
7. Management style		.57	
8. Group role		.81	
9. Perform task to the group's standards		.70	
10. Policies, rules, and procedures		.77	
11. Behave consistent with values and ideals		.76	
12. Politics		.64	
1. Responsibilities, task, and projects			.65
2. Perform tasks			.72
3. Priority			.71
4. Tools			.58
5. Resources			.64
6. Support			.68
7. Customers			.50
8. Meet customer's needs			.69
9. Inform supervisor			.67
10. Job performance			.77
11. Necessary forms/paperwork			.61

Note. \* Items showing variability in the groups of newcomers and full member employees.

invariance was achieved for NSQ-T and NSQ-G, whereas partial metric invariance examination was conducted for NSQ-O. Two factor loadings were relaxed, constituting 17% of the estimated parameters, for achieving partial metric invariance. Dimitrov (2006) recommendations pointed out 20% as the threshold for the relaxed parameters for satisfactorily estimating partial metric or scalar invariance. The two factor weights relaxed regarded the following items: operations (NSQ-O4), and objectives and goals (NSQ-O5).

Scalar invariance was examined through the comparison between full or partial metric invariance models and constrained models where, beyond factor loadings, all intercepts were fixed. The results presented in Table 1 pointed out that the difference between the two compared models for the three subscales fell into the threshold of acceptance for both CFI (NSQ-T  $\Delta$ CFI = .002; NSQ-O  $\Delta$ CFI = .004; NSQ-G  $\Delta$ CFI = .007) and RMSEA (NSQ-T  $\Delta$ RMSEA = 0; NSQ-O  $\Delta$ RMSEA = .003; NSQ-G  $\Delta$ RMSEA = 0). Thus, full scalar invariance was achieved for the three subscales.

In sum, full measurement invariance was achieved only for NSQ-G and NSQ-T, whereas partial measurement invariance resulted for NSQ-O. This means that the idea of the group and the task represented in the NSQ are similarly conceived for newcomers and full member employees, while the conceptualization of the organization is dissimilar in some aspects.

#### *Latent Means Comparison*

Finally, the NSQ mean latent scores of the newcomers were compared to those of the full members to further support the construct validity. Essentially, because full member employees should have a better knowledge of their organization, work group, and task, given that their membership is much longer, this analysis constitutes a further criterion for examining the construct validity of the Italian version of the NSQ (H4). According to Byrne (2004) and Dimitrov (2006), to investigate latent means of the three latent dimensions of the NSQ, the latent means of just one of the groups included in the analysis should be fixed to zero. Thus, the latent means of the newcomers were fixed to zero and the latent means of the full member employees were estimated. Results presented in Table 3 indicated that full member employees showed significantly higher scores for all the three NSQ subscales; further, the fit of the models examining latent means fitted the data very well. Thus, according to Byrne (2004) and Dimitrov (2006), the estimates associated with the current solutions can be confidently interpreted. These findings supported H4, providing additional support to the construct validation of the Italian version of the NSQ.

TABLE 3  
 Latent means comparison of the three NSQ subscales for newcomers and full member employees

NSQ subscale	Estimate	SE	CFI	RMSEA
Organization	.76*	.55	.908	.061
Group	.44*	.52	.923	.064
Task	.58*	.52	.946	.048

*Note.* SE = standard error; CFI = comparative fit index; RMSEA = root mean square error of approximation.  
 \* p < .05.

## STUDY 2

### Sample and Procedure

A total of 476 participants took part in this study — 254 men (53.4%) and 222 women (46.6%) aged from 19 to 67 years ( $M = 40.55$ ,  $SD = 12.24$ ). Most of them had worked in the current organization for more than two years (72.3%) and had a permanent job (76.3%). The majority is employed in the service sector

(84.7%), whereas a few are employed in the industry (13.7%) and agriculture (0.6%). Five participants did not answer the sector item.

In this case as well, data were collected through an anonymous questionnaire, administered by hand delivery and return. Administration was conducted through the snowball technique involving graduate-students who voluntarily took part in the data-collecting phase after a training session. These students administered a limited number of questionnaires. All participants were informed of the anonymity and confidentiality of the survey.

### Measures

*Newcomer Socialization Questionnaire.* The scale is the same used in Study 1 (Haueter et al., 2003). Participants were asked to respond using a Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

*Job Satisfaction.* Overall job satisfaction was measured by adapting three items from Judge, Locke, Durham, and Kluger (1998). One item example is: "I feel fairly well satisfied with my present job." Response scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*.

*Performance.* Three items of the Performance scale proposed by Griffin, Neal, and Parker (2007) were used to measure task performance (e.g., "Carried out the core parts of your job well"). Participants were asked to self-evaluate their performance, indicating how often they had carried out the behavior over the previous month, along a 5-point scale ranging from 1 = *very little* to 5 = *a great deal*.

*Work-family conflict.* Five items of the Italian adaptation (Colombo & Ghislieri, 2008) of the measure proposed by Netemeyer, McMurrian, and Boles (1996) were used. An item example is "Things I want to do at home do not get done because of the demands my job puts on me." Response scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*.

### Results

Zero-order correlations (Pearson's *r*) were used to examine the associations between variables. Table 4 depicts zero-order correlations between the two variables of our Study. The three subscales of NSQ related to the organization, group, and task level were positively associated to job satisfaction and performance. Moreover, a weak negative nonsignificant relationship was found between the three aspects of organizational socialization and work-family conflict. These results supported H1, H2, and partially H3, and provided support for the construct validity of the Italian version of the NSQ.

TABLE 4  
 Descriptive statistics, zero-order correlations, and reliabilities (diagonal in bold)

	<i>M (SD)</i>	1	2	3	4	5	6
1. NSQ-Organization	4.17 (0.64)	<b>.86</b>					
2. NSQ-Team	4.28 (0.59)	.74**	<b>.92</b>				
3. NSQ-Task	4.45 (0.50)	.64**	.73**	<b>.87</b>			
4. Job satisfaction	3.35 (1.12)	.32**	.32**	.27**	<b>.92</b>		
5. Performance	4.29 (0.57)	.35**	.36**	.44**	.12**	<b>.82</b>	
6. Work-family conflict	2.71 (1.01)	-.06	-.04	-.06	-.15*	-.10*	<b>.90</b>

\* *p* < .05. \*\* *p* < .001.

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## DISCUSSION

As noted by Cooper-Thomas and Anderson (2006), given the centrality of adjustment for all role transitions and mostly at the newcomers entry stage, a reliable and valid measure of organizational socialization is of utmost interest. Accordingly, the aim of the current study was twofold. First, to extend previous validation of the scale by testing the equivalence of the scale on two groups of participants — newcomers and full member employees — through measurement invariance. Second, to examine the factorial and construct validity of the Italian version of the NSQ.

Overall, results of these two studies are consistent with previous findings, which indicated that the NSQ is a reliable and valid scale to measure organizational socialization, showing good psychometric properties in the Italian context as well. In particular, evidence of factorial and construct validity of the Italian version of the NSQ was found, as well as findings related to the measurement invariance of the scale in two groups of participants: newcomers and full member employees. Because previous validation of the NSQ conducted by Haueter and colleagues (2003) examined the factorial validity of the scale separately in employees at different stages of socialization (full members and newcomers), the point related to how these two categories of employees could conceive (similarly or differently) organizational socialization remained unexplored. Thus, the current study, testing measurement invariance between the two groups, filled this gap by strengthening the validity and the stability of the scale, also in the light of the dynamic nature of the socialization construct.

Results showed that the NSQ structure could be considered similar for employees in different stages of socialization, except for two items in the NSQ-O subscale, which resulted to be variant in the two groups. Thus, results comparing the two groups on the NSQ-O subscale should be interpreted with caution. Organizations and their members are not static entities but, rather, highly dynamic protagonists of socialization processes that change in time, context-by-context, and group-by-group (Ashforth, 2012; Levine & Moreland, 1991). To be effective members, newcomers are expected to proactively adapt to the new organizational environment. Anyhow, the kind of job and specific contextual factors, such as socialization tactics enacted by the organization, may affect temporal development of learning and adjustment processes. Thus, this variability may be due to the specific employees' job and organizational context.

In sum, results of the current study supported the use of the Italian version of the NSQ for research and practical purposes. However, because a certain degree of variability was found for two items of the NSQ-O subscale, caution is needed in interpreting the organizational level of the process.

### Limitations and Suggestions for Further Research

To the best of our knowledge this is one of the first study examining the NSQ. Thus, some limitations should be taken into account.

First, the overall sample is heterogeneous. Future research should endeavour to examine NSQ in more homogeneous samples to verify the stability and generalizability of the scale in different work contexts. In particular, testing whether the degree of the organizational variability of the scale is related to specific job or organizational contexts may be worthwhile. This supposition opens to further avenues of research. Specifically, two possible speculations may be drawn from the current findings. The first assumption is related to the possibility that specific “fixed” aspects of organizational socialization exist in all organizational contexts and, without the intervention of any changes in the organization, may not vary longitudinally. In other words, we hypothesized that a kind of hard core of the organizational socialization process exists, serving as

a pivot for the possible adaptation and success of any employee. Then, a second assumption regards the possibility that some of the organizational socialization aspects may vary contextually job-by-job or organization-by-organization. Specifically, each organizational context may account for some specific aspects, which characterize the particular socialization process of a certain organization. Practical implications stemming from this theoretical speculation would provide practitioners with useful clues aimed to address the successful adaptation of a new member.

Second, the examination of predictive validity would be recommended in the future. A longitudinal design is especially needed to investigate the relationship between the organizational socialization success rate and specific proximal outcomes (such as task mastery and social integration) and distal outcomes (such as job satisfaction, performance, and organizational commitment). Moreover, a longitudinal study would exactly depict the development of the idea that the same employees would have regarding the socialization about the task, group, and organization, both at the stage of new members and at the stage of adjusted and full members.

Third, because the NSQ allows to capture a multilevel perspective in analysing the organizational process, a multilevel analysis would be strongly recommended to adequately examine the impact of the organizational socialization process on proximal and distal outcomes at different levels of analysis, such as task, group, and organization.

Fourth, further studies comparing the NSQ cross-culturally are recommended to further support the validation and the generalizability of the scale. Also, drawing from current research, it would be very interesting to test whether the variability of the organizational level of the scale could be related to cultural belonging.

Fifth, given that the correlations between the three NSQ subscales and work-family conflict are very close to 0, discriminant validity should be supported. This relationship may be mediated or moderated by other relevant variables, such as gender and parental status, or others associated to the employees' careers. Thus, according to Ellis and colleagues (2015), future studies are needed to explore this relationship more in depth.

Sixth, contrary to Haueter and colleagues (2003), who did not report a significant relationship between organizational socialization and performance, the present study found evidence of a positive and statistically significant relationship. One main difference between ours and Haueter and colleagues' work is that performance in the current study was self-rated whereas Haueter and colleagues used a supervisor rated performance measure. Self-report measures are only a proxy for behavioural measure, such as performance, because, in general, individuals appear to be biased toward judging their own behaviour as meeting higher standards than the behaviour of others (Harris, 1988). Thus, future studies should endeavour to also include more objective performance measures. Results on organizational socialization and performance are mixed (e.g., Adkins, 1995; Bauer & Green, 1998; Haueter et al., 2003; Morrison, 1993; Spagnoli, 2017), and thus, according to Ellis and colleagues (2015), future studies should address more thoroughly this relationship. For instance, examining the relationship among the three organizational socialization aspects/levels and different degrees of performance at the work, group, and organizational levels. Moreover, during the last 15 years of organizational change transformations, the relationship between organizational socialization and performance has been scarcely investigated (Spagnoli, 2017). Therefore, it would be worthwhile to examine this relationship more in depth at the present time.

Seventh, in the current study, apart from performing separate tests on each of the three NSQ subscales, we also tested the fit of the NSQ scale as a whole. Results indicated that also this specific model fit the data satisfactorily. However, due to the sample size we should interpret this evidence with caution. Further studies aimed to test the NSQ scale as a whole should use a larger sample.

Finally, several other variables, such as socio-demographics (gender, age, educational level, etc.), and both individual and organizational variables, could account for the differences in the NSQ in terms of

newcomers and full member employees. Thus, future studies in Italy should address this issue by comparing, for example, the pattern of knowledge acquisition during different stages of the employee entry process (Bauer & Erdogan, 2012).

### Practical Implications

Practitioners might use the NSQ with the purpose of monitoring the development of the newcomers' organizational socialization process. Results of the current study pointed out a certain degree of variability in the way a new employee and a full member employee conceive the socialization process regarding the group. Thus, an adaptation of the NSQ-G to the particular work context should be preliminarily conducted to obtain specific clues regarding the organizational socialization aspects that should be especially taken into account to design successful training sessions and human resource development interventions. Given that the NSQ assesses newcomers' knowledge about several contents of the organizational socialization process, and the dynamic interplay occurring between newcomers and organization towards an effective adjustment, managers could design specific interventions to provide support for specific and successful knowledge acquisition and learning. For instance, specific individual and group training sessions, as well as tutoring and mentoring interventions aiming to enhance the newcomers' awareness about the organization and group goals, politics, and practices, might be implemented.

### NOTES

1. Subjects whose tenure was between one and two years ( $n = 132$ ) were excluded from this Study and added to the sample of Study 2.
2. Similarly to Haueter, Hoff Macan, and Winter (2003), because of concerns for the sample size to estimated parameter ratio, three separate one-factor models were assessed. However, for completeness purpose, we also reported the fit of the model where the three subscales were included and correlated.

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