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# The role of collective labor contracts and individual characteristics on job satisfaction in Tuscan nursing homes

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**Background:** The role played by remuneration strategies in motivating health care professionals is one of the most studied factors. Some studies of nursing home (NH) services, while considering wages and labor market characteristics, do not explicitly account for the influence of the contract itself.

**Purpose:** This study investigates the relationship between the labor contracts applied in 62 Tuscan NHs and NH aides' job satisfaction with two aims: to investigate the impact of European contracts on employee satisfaction in health care services and to determine possible limitations of research not incorporating these contracts.

**Methodology:** We apply a multilevel model to data gathered from a staff survey administered in 2014 to all employees of 62 NHs to analyze two levels: individual and NH. Labor contracts were introduced into the model as a variable of NH.

**Results:** Findings show that the factors influencing nursing aides' satisfaction occur at both the individual and NH levels. Organizational characteristics explain 16% of the variation. For individual characteristics, foreign and temporary workers emerge as more satisfied than others. For NH variables, results indicate that the labor contract with the worst conditions is not associated with lower workers' satisfaction.

**Conclusion:** Although working conditions play a relevant role in the job satisfaction of aides, labor contracts do not seem to affect it. Interestingly, aides of the NHs with the contract having the best conditions register a significantly lower level of satisfaction compared to the NHs with the worst contract conditions. This suggests that organizational factors such as culture, team work, and other characteristics, which were not explicitly considered in this study, may be more powerful sources of worker satisfaction than labor contracts.

**Practice Implications:** Our analysis has value as a management tool to consider alternative sources as well as the labor contract for employee incentives.

**Key words:** employee motivation, human resources, labor contract, nursing homes, performance management

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In health care services, performance is the result of a synergistic combination of several intangible elements related to human, relational, and structural factors of the organization. Professionals with their knowledge, skills, and abilities are employed by the institution to deliver quality care to patients (van Beveren, 2003; Yavas & Romanova, 2005): The overall performance of the organization depends most on the performance of its employees, which itself is based on their capabilities, behavior, and motivation. In this context, intangible resources are the drivers of outstanding performances in hospitals (Brannon, Zinn, Mor, & Davis, 2002; Douglas & Ryman, 2003; Zigan, Macfarlane, & Desombre, 2007). Some research has found that factors enhancing motivation and job satisfaction are connected to relational factors such as the provision of a clear sense of vision and mission, respect shown by employers, good relationships with supervisors, well-organized job design, and adequate wage and working conditions (Bishop, Squillace, Meagher, Anderson, & Wiener, 2009; Chamberlain et al., 2016; Henderson & Tulloch, 2008; Jetha et al., 2017; Meyer, Raffle, & Ware, 2014; Trybou, 2014).

In particular, wage and, in broader terms, the remuneration and compensation strategies influence the motivation of health care professionals; the effects, however, vary on the basis of gender, type of services, disciplines and professional profile, country, type of employment, and sector (Igalens, & Roussel, 1999). Broader definitions of compensation include base and variable pay (monetary rewards) as well as benefits, work holidays, working conditions, etc. (nonmonetary rewards; Gomez-Mejia, Berrone, & Franco-Santos, 2010; Martocchio, 1998). These working conditions typically are included in the terms specified in European labor contracts or, in general, civil law regulations (Nickell, 1997). American contractual clauses and conditions are mostly in the form of general guidelines and framework, where the employment relationship could end at any time and where hiring and contract stipulations are negotiated (and may be from time to time renegotiated) between individuals and the organization. This is a significant difference from the way European labor contracts are structured, where individuals do not negotiate directly with the employer. As a consequence, studies of the nursing home services that focus on North American labor dynamics and consider wages and labor market characteristics or working conditions may not consider the influence of the contract itself.

In Italy as well as other European countries with similar labor contract frameworks, this means that employees' working conditions depend on both individual factors, such as job tenure, and organizational factors determined by the collective agreements signed by the structures such as base pay, number of holidays, and working hours. Indeed, variability in the collective labor contracts for health care workers is quite limited, with few exceptions in long-term care, such as for aides in the nursing homes.

Nursing homes may apply any of seven national collective agreements. The different working conditions included into the collective agreements therefore may affect job satisfaction in nursing homes.

Studying the factors that may influence job satisfaction of aides is particularly relevant because they are the main actors of nursing homes both in terms of numbers of workers and in terms of time spent with the residents. They daily face groups of institutionalized individuals who often are passive, withdrawn, disengaged, or apathetic, and they are responsible for caring for these patients' physical needs or "bed and body work" (Wood & Gubrium, 1977). Basford and Slevin (2003) note the lack of attention given to nursing aides and suggest that this may be due to their lower level of education or professional standing.

This article aims at providing empirical evidence on the relationship between job satisfaction of aides and their individual and collective working conditions. To disentangle the influences of these distinct working conditions, we applied a multilevel model to a survey administered to 62 Tuscan nursing homes (Italy).

## Theoretical Framework

In European countries, a collective agreement is recognized as a legal institutional arrangement. All in all, collective agreements are adopted for two thirds of European workers (Visser, 2008). Typically collective agreements are binding for the contractor, and in most of the southern and central European countries, in practice they also are applied to nonunionized workers. The union membership statistics provide evidence on the differences in influences exerted by unions and the bargaining process among Western countries: The bargaining coverage rate in 2004 was only 13.8% in the United States (about 30% in Canada), whereas in nine European countries, the rate is almost 80% (minimum of 35% in the United Kingdom and maximum of 99% in Austria) (Visser, 2008).

Previous studies of the effect of unionization on job insecurity among Swedish health care employees suggest that the collective support derived from union membership could make individual voice expression less important while privileging membership shared values (Sverke & Hellgren, 2001). Other research highlights that unionized workers are more satisfied with financial compensation and job security than nonmembers. On the other hand, unionized workers seem to be less happy with the quality of their jobs than nonunion workers (Meng, 1990). In a recent study, Hipp and Givan (2015) examined the association between union membership and job satisfaction in a cross-national perspective, taking into account country-level information about union and labor market characteristics. They note that the relationship between union membership and job satisfaction varies across countries. However, the

relevance of unions is limited; only certain aspects of job satisfaction may be effectively adjusted by unions.

In Italian labor markets, collective agreements are the main source of stipulating and regulating conditions of nearly every aspect of employment relationships. They are negotiated by unions instead of individuals. Although collective agreements do not have the power of law, *de facto* they define and regulate working rules, conditions, and worker's compensation as the outcome of an organized hierarchical bargaining process. In this scenario, workers do not individually bargain their base pay as well as other employment conditions. The literature on nursing aides highlights that professionals' reasons for continuing to work include, above all, monetary needs, relationships with residents, working environment, training opportunities, and gratification (Castle, 2013; Chamberlain et al., 2016; Meyer et al., 2014; Sung, Chang, & Tsai, 2005). Indeed, a sizable number of articles clearly considered wage levels and their differences as important influences on both job satisfaction and turnover of nursing homes staff (Zinn, 1993).

In particular, some authors find that the high rate of turnover among aides employed in nursing homes has been commonly associated with the low job status and the poor job benefits accorded to workers (Bishop et al., 2009). Labor conditions in the public sector, including job benefits, are regulated by collective agreements that can be defined as the tools used to regulate salaries and working conditions (holidays, working hours, etc.) at an industrial level (Feldman & Scheffler, 1982). We expect that collective contracts reporting higher base pay or/and better nonmonetary working conditions are associated with a higher level of job satisfaction.

*Hypothesis 1:* Collective contracts with better working conditions are associated with a higher level of job satisfaction.

Because of the crucial spread of temporary employment positions, many authors studied the possible associations between the contract type (temporary vs. permanent employment) and different variables such as job satisfaction, organizational commitment, and life satisfaction. Temporary employment refers to dependent jobs of limited duration, with fixed-term employment contracts; temporary agency work is the most common contract type in Europe (OECD, 2002). Some problems have been highlighted, for temporary workers, in terms of low pay, limited access to fringe benefits, and limited union protection (Kalleberg, Reskin, & Hudson, 2000). Furthermore, the research results are even now inconsistent and inconclusive, and the possible benevolent or detrimental consequences of temporary employment as compared to permanent employment are still debated (Connelly & Gallagher, 2004; De Cuyper, de Jong, De Witte, Isaksson, Rigotti, & Schalk, 2007).

Generally, job insecurity has often been suggested as a critical factor in the understanding of temporary workers'

work experiences, sometimes associated with organizational citizenship behaviors (De Witte & Naswall, 2003). Some studies have highlighted possible negative effects on job satisfaction (de Graaf-Zijl, 2012). For example, Booth, Francesconi, and Frank (2000) show that temporary workers were less satisfied, received less work-related training, and were less paid than their counterparts in permanent employment. A more recent study conducted on about 400 Korean nurses reveals that, overall, permanent nurses presented higher levels of job satisfaction, organizational commitment, and empowerment than did temporary nurses (Han, Moon, & Yun, 2009). Similar conclusions can be drawn from a Finnish study on health care workers (Mauno, Kinnunen, Mäkikangas, & Nätti 2005) that also analyzed the level of perceived job insecurity.

Alternatively, some research shows that temporary work is not necessarily associated with a reduction of job satisfaction and organizational commitment (De Witte & Naswall, 2003). With such differing predicted behavioral responses, we propose to test whether permanent aides register a higher level of job satisfaction.

*Hypothesis 2:* Permanent workers are more satisfied than temporary workers.

Consistent with previous work, our study takes into account the possible influence of different features characterizing nursing homes personnel. Previous studies have highlighted employee gender, age, level of education, and citizenship as important to consider because of their possible correlation with job satisfaction. For example, nursing aides' education has been found to be marginally and negatively associated with job satisfaction (Gittell, Weinberg, Pfefferle, & Bishop, 2008). In addition, an entire stream of literature attempts to explain the gender gap in job satisfaction. The fact, women seem to be more satisfied with their jobs than men may reflect the different values that men and women have with respect to work (de Graaf-Zijl, 2012). Variables such as these, which relate to the personal profile of the involved workers, are explicitly considered in our analysis by the individual level of the multilevel model.

## Background and Context

Italian national reports from 2014 (MEF, 2014) provide evidence that two thirds of the cost of long-term care derive from elderly care, in particular for residential services. Although acute care in Italy (in particular in Tuscany) is provided mainly by public facilities, long-term care, with a focus on nursing homes, is provided by a wide range of organizations: public sector (around 16%); private sector, primarily not for profit (54%); and religious organizations (13%; Istat, 2013). This diversity of provider organizations

has led residential homes to apply alternative forms of contracts. In Italy, it is possible to identify seven distinct labor contracts with different conditions. Table 1 reports the individual and average values of six labor conditions for each of the seven contracts that were valid during the period of the analyses for the nursing aide profile.

As shown in Table 1, the contracts exhibit wide variations in all categories with the exception of base-level monthly working hours (164–165) as shown in Column 4, with only one (Contract A) showing a lower level (156). Although most contracts (and almost all nursing aides) register the same amount of base working hours, some differences exist in other nonmonetary working conditions, such as the number of vacation days that may vary from 26 to 33 (a difference of 7 days or 26.9%). Wide variations, in absolute terms, also occur in monetary conditions: The monthly wage varies from 1,297 to 1,497 euros, a 200-euro difference for employees under Contract C versus the reference contract. Although this is only about a 15% difference, a monthly difference of 200 euros among colleagues across nursing facilities is considerable, particularly in view of the Italian national relative poverty threshold for a family of three people of approximately 1,300 euros per month. This difference on base pay may be mitigated by other conditions, such as variations in overtime hours (80 hours: 100–180, an 80% difference), and the percentage of pay increase for special periods: 15 percentage points (15%–30%, a 100% difference) for Sunday and 22 percentage points (10%–32%, a 220% difference) for night working. Although it is not possible to determine actual compensation across employees, the reference contract clearly shows less attractive conditions than the average for all the components with the exception of higher overtime working hours (10 more than the average).

Pensions and health plans are both included in the Italian welfare state; therefore, these should not be an issue in explaining variability.

## Methods

### Sample and Data Collection

Our study relies on a census survey administered to the 62 nursing homes joining the network on comparing performance developed by the MeS Lab (Institute of Management, Sant'Anna School of Advanced Studies of Pisa; see Nuti & Rosa, 2014). These nursing homes represent 19.1% of the total facilities settled in the Tuscany Region.

The survey was conducted in 2015 (from 16 March to 30 June) and included 2,648 workers in 62 nursing homes; 60% of them were nursing assistants. In particular, the participation in the census was offered to all those who, at the time of its launch, were working in the facilities for at least 3 months, independent of their employment status (full time, part time, at fixed, permanent, temporary, freelance, etc.) and their professional background. Our study focuses only on the category of aides; thus, the sample includes the 1,128 both partially or totally completed questionnaires returned voluntarily by nursing aides. Considering only the nursing assistant profiles, the response rate was quite high 72% (vs. the general one of 58.5%).

Data for the measures of nursing aides' motivation and personal characteristics were obtained from the organizational climate survey administered via computer-assisted web interview. Data for control variables are extracted from performance management systems developed for the Tuscan governance system (Nuti & Rosa, 2015; Nuti, Vola, Bonini, & Vainieri, 2015).

The organizational climate survey is multifactorial and developed from the periodic survey administered in the health units of the Tuscany Region (Murante, Vainieri, Rojas, & Nuti, 2014; Vainieri, Ferrè, Giacomelli, & Nuti, 2017) and surveys conducted in other countries on similar sectors (Laschinger, Finegan, & Shamian, 2001). The survey is used as an internal tool to understand organization

**Table 1**

### Working conditions of different labor contracts

Labor contracts	Reference							Mean
	Contract A	Contract B	Contract C	contract	Contract D	Contract E	Contract F	
No. of aides per contract typed ( <i>n</i> )	320	35	17	65	17	230	444	161.1
Year of last update	2009	2014	2010	2008	2012	2013	2011	na
Base pay (€ per month)	€1,327	€1,427	€1,497	€1,297	€1,417	€1,328	€1,432	€1,389
Working hours (per month)	156	165	165	164	165	164	165	163.4
Vacation days (per year)	30	28	33	26	30	26	26	28.4
Increase in pay for Sunday work (%)	30	24	15	15	27	15	15	20.1
Increase in pay for night work (%)	30	24	15	20	32	20	10	21.6
Overtime hours (per year)	180	150	120	160	180	160	100	150

cognitive appraisal and for the diagnosis of the organizational climate useful to identify the successful and critical factors against which action, either to reinforce the results or to promote change, can be taken. Respondents were asked to rate their top management and working practices and context. All survey questions are in the form of a 5-point Likert scale. For the analysis, the 5-point scale was transformed to a 100-point scale for comparability reasons following the approach adopted by others (Hann, Bower, Campbell, Marshall, & Reeves, 2007; Murante, Seghieri, Brown, & Nuti, 2014) on the analysis of questionnaires.

## Measures

Job satisfaction has been measured in several ways, often using multiple metrics (Cantarelli, Belardinelli, & Belle, 2015). In this study, job satisfaction is derived from responses to the following survey questions: (a) How satisfied are you with your current job? (b) Are you proud to be part of the organization you work for? (c) Would you recommend the nursing home they work for to a friend? Taken together, these questions provide an indicator or measure that considers both overall feeling about job satisfaction and specific facets related to organizational commitment as well as pride and willingness to recommend which can be considered part of organization image (Eskildsen, Kristensen, & Westlund, 2004).

Nursing assistants reported their job satisfaction on a 5-point scale: 5 = *extremely satisfied*, 4 = *somewhat satisfied*, 3 = *neither satisfied nor dissatisfied*, 2 = *somewhat dissatisfied*, 1 = *extremely dissatisfied*. They reported their pride in being part of the organization they work for on a separate 5-point scale: 5 = *strongly agree*, 4 = *agree*, 3 = *undecided*, 2 = *disagree*, 1 = *strongly disagree*. The nursing assistants reported their willingness to recommend the nursing home to a friend on a 5-point scale, with the following responses: 5 = *strongly recommended*, 4 = *recommended*, 3 = *undecided*, 2 = *discouraged*, 1 = *strongly discouraged*. Applying reliability analysis, we found that the Cronbach's alpha of the motivation at work scale has a value of .86 ( $p < .01$ ).

We converted the answers to these three questions into a 0–100 score using a transformation where 1 = 0, 2 = 25%, 3 = 50%, 4 = 75%, and 5 = 100%. Higher scores indicate a more satisfied employee. This approach is similar to those applied by others (Hann et al., 2007; Murante, Seghieri, et al., 2014) For each employee, the job satisfaction was calculated as the average of the scores on the three aforementioned questions.

The independent variables reported in Table 2 are distinguished by individual and organization levels. All individual values come from the organizational climate survey described above. At the individual level, we include position tenure as an independent variable. In addition, consistent with previous studies on aides, we include as

control variables gender, age, citizenship, level of education, and employment relationship (work).

Independent variables at the organizational level include both collective agreements and facility size. The latter is measured as the number of beds and is reported as one of four levels, as shown in Table 2. As noted above, a number of factors and effects (i.e., referring to compensation, job design, social support, overtime, etc.) derive from trade union agreements and arrangements. The trade union agreement or arrangement is the key variable we introduce into the model to detect the influence of these factors on motivation. There are different types of agreements in place as described in the table. The form of contract selected as the base or reference contract is the agreement that reports the lowest base pay. The effect of any other contract form is measured relative to the reference contract.

## Data and Descriptive Statistics

The job satisfaction indicator has a mean score of 79.34, or approximately 80, with large variability across the 62 nursing homes: Indicator values range from 50 to 100. The indicator scores for each nursing home that resulted from our construction are available upon request. Table 2 provides descriptors of the survey data used in our study. The table reports for each variable in our model the defined

**Table 2**

### Independent variables: Metrics and data descriptors

Variable	Metric	<i>n</i>	Percent
Gender	Female	792	70.21
	Male	94	8.33
	Missing	242	21.45
Age (years)	Under 35	91	8.07
	35–49	428	37.94
	Over 50	332	29.43
	Missing	277	24.56
Employee relationship (work)	Permanent work	427	37.85
	Cooperative	475	42.11
	Contingent work	30	2.66
	Missing	196	17.38
Education	Primary school	379	33.6
	High school	406	35.99
	Graduated	60	5.32
	Missing	283	25.09
Citizenship	Italian	901	79.88
	Foreign	57	5.05
	Missing	170	15.07
Facility size	# < 30	129	11.44
	30 < # < 50	418	37.06
	50 < # < 80	268	23.76
	# > 80	313	27.75

# indicates for Number of beds.

levels of measurement or categories, the number of observations, and the percentage of total that each level or category accounts for. Details of the individual dependent and independent variables are described in Table 2.

We included both fully completed and partially completed surveys in our analysis. Fully completed surveys are those where the employee answered every question; partially completed surveys have some answers missing. Although we recognize that incomplete data often result in analytical difficulties, in our analysis, focused on personal and intangible characteristics, the missing answers are themselves revealing: those questions left unanswered provide insight into motivations and incentives of those employees who volunteer to participate in the survey. Accordingly, we note below missing values that may be interpreted behaviorally.

At the individual employee level, we focused on gender, age, citizenship, education level (qualification), and employment relationship of the respondents. Up to 70% of personnel completing the surveys were female. As shown in Table 2 for this variable, there is a high percentage of missing values (about 21%); this may reflect male workers who consciously abstain from answering this identifying question; however, we examine this further below. The age variable shows that about 8% of respondents are under 35 years old. Most of the respondents were in the mid-range of the age category, whereas about 30% were in the high age group. About 24% were missing values. The variable of citizenship indicates that 80% of respondents were Italian. About 15% were missing values; as we have noted for the gender variable, this could conceal a significant number of foreign workers who do not wish to be identified.

The most prevalent level of education declared was the high school diploma followed by primary school. Only 5% of respondents had an education level greater than a high school diploma. It is possible that the greater part of the missing values for education (around 25%) belongs to this group; we examine this further below. The employment relationship indicates a tangible influence exerted by job security, duration, and conditions on workers' motivation. For this reason, we distinguished between permanent workers (almost 38%), cooperative society employees (more than 42%), and freelancers or other temporary workers (2.66%). There were fewer than 200 missing values for the employment relationship variable (about 17%). In these cases, it most probably reflects the categories of contingent workers who are either temporary or from cooperatives; many of these may be concerned with being identified.

## Analysis

To test the effect of the labor contract on job satisfaction, we performed a multilevel analysis (Glick, 1985). The multilevel model we have developed is the appropriate technique for data with a hierarchical structure such as we have obtained through the survey. The survey data are char-

acterized by two integrated levels of observation: Employees at the lower level of analysis are nested within the residential nursing home at the higher level. Because of this hierarchical structure, we can (a) observe if motivation varies both across and within nursing homes, (b) measure the effects of both individual characteristics and nursing home factors on employee motivation, and (c) return separate information on motivation variability explained by the characteristics of employee and the labor contract applied by the nursing home.

A multilevel analysis generally begins with consideration of the empty model in which only the general intercept and the two error components are presented. Consistent with this approach, we first analyze the variability of motivation at the individual and residential levels through an empty model. The empty model allows for estimating the variance of the two error components and to determine the intraclass correlation coefficients, given from the variation between groups and the comprehensive variation across groups. We then introduce the characteristics of employees and the labor contracts as explanatory variables as follows. When the variation between results is statistically different from zero, we proceed with the estimation of the model in which the covariance of the first (employee) level is added. We successively estimate a model with the covariance both of the first level with that of the second (organization) level.

Similar to those defined as hierarchical models (Leeuw & Meijer, 2007), our model thus provides the ability to take advantage of the hierarchical structure of the data and to incorporate this analytically. The variation of the component of the error is both from Level 1, *within* the group (i.e., the individual part), and from the Level 2, *between* the groups (i.e., the organizational part), in this case the nursing homes. The total variation of the dependent variable, job satisfaction, is equal to the sum of these two variations.

## Results

Variation in job satisfaction is significantly explained by both the individual and nursing home levels when analyzing an empty model without any explanatory variables (see Table 3). Most of the total variance in job satisfaction is explained by individual characteristics. However, the nursing home level explains almost 16% of variation; this is quite high for an organization.

We then introduce the explanatory variables at the levels of employee (Level 1) and the nursing home (Level 2). First, we observe that gender, education, citizenship, and type of work are significantly associated with job satisfaction. Specifically, values of job satisfaction decrease when aides do not report their gender or school education and increase when aides come from outside of Italy or they do not declare their citizenship. Nondisclosure of education may reflect social attitudes that connect work as nursing aides with lower levels of education. The negative sign for

**Table 3**  
Results of the multilevel models

Variables	Empty model	Individual level	Organizational level
Constant	79.9*	82.95*	76.49*
Gender (female vs. male)		1.43	1.02
Gender (missing vs. male)		-6.78*	-6.55*
Age (35–49 vs. under 35)		1.71	1.59
Age (over 50 vs. under 35)		1.77	1.63
Age (missing vs. under 35)		-0.975	-1.13
Education (high school vs. primary school)		-2.36	-2.7
Education (graduation vs. primary school)		-4.071	-4.21
Education (missing vs. primary school)		-5.44**	-5.65**
Work (cooperative vs. permanent)		-2.072	-2.15
Work (short term vs. permanent position)		9.43**	9.62*
Work (missing vs. permanent position)		-5.182	-5.27*
Citizenship (foreign vs. Italian)		9.44*	9.38**
Citizenships (missing vs. Italian)		6.12**	5.93**
Contract (Contract A vs. reference)			-7.51
Contract (Contract B vs. reference)			-12.68
Contract (Contract C vs. reference)			-27.51**
Contract (Contract D vs. reference)			2.86
Contract (Contract E vs. reference)			-1.08
Contract (Contract F vs. reference)			-2.70
Beds (30–50 vs. <30)			4.12
Beds (50–80 vs. <30)			-0.34
Beds (>80 vs. <30)			8.05***
Random effects			
Level 2 variance: nursing homes	102.03	82.03	57.91
Level 1 variance: employees	537.14	508.95	509.86
Intraclass correlation (% Level 2)	16	13.88	10.20
Log likelihood	-5.188	-5.154	-5.149
No. of observation	1128	1128	1128

\* $p < .01$ . \*\* $p < .05$ . \*\*\* $p < .1$ .

missing variables in this category would be consistent with this interpretation. For gender in particular, we could have assumed that the missing responses were “male” because of the high number of responses as “female”; men could have preferred to keep being anonymous. However, considering the number of responses and the sign, missing responses of gender are a mix of both female and male nursing aides who feel less satisfied than others. The positive sign in missing values for foreign is consistent with concerns noted above associated with possible identification from declaring non-citizen status in the survey response. These missing values therefore appear to be associated with the categories we would expect, with the exception of gender, as they have the sign of the predicted category we identified (graduated less satisfied and foreign more satisfied).

Moreover, our results in Table 3 show that aides with a temporary position show greater job satisfaction than those with a permanent position, hence refusing Hypothesis 2. This appears to be a conflicting result because contingent work is related to job insecurity; this is generally

perceived as a threat of job loss and, in turn, is expected to negatively affect job satisfaction. Indeed, our results provide additional support for earlier research that found that job security is not correlated to job satisfaction (Cantarelli et al., 2015). The positive relationship of temporary workers suggests that aides value positively continuing to work for the company and believe that the company will continue to hire him or her in the case of a good performance; hence, he or she would experience greater satisfaction on the job (Wheeler & Buckley, 2001). Concerning education, the one significant category is the missing one that we imputed to graduated positions. Indeed, other research has highlighted the finding that registered professional nurses have a higher level of intention to leave the long-term care services work relative to others (McGilton, Tourangeau, Kavcic, & Wodchis, 2013).

At the organizational level, we focus exclusively on two variables: the collective agreement adopted by each nursing home and the facility size. The first variable, collective agreement, essentially represents a sort of all-embracing variable of labor conditions and level of wage as reported in Table 1.

Incorporating collective agreements and facility size into the model helps to reduce the unexplained variance across 639 nursing homes of about 11% (i.e., when comparing the Level 2 variance with the Level 2 variance of the empty model).

Controlling for some individual characteristics (e.g., gender, age, etc.; see Table 2), we find that job satisfaction in nursing homes appears not to be influenced by contracts, indicating a lack of support for Hypothesis 1. The only exception is for the case of Contract C. Surprisingly, Contract C registers a significant lower level of satisfaction: The base pay is higher by 200 euros per month with the respect to the reference contract. These findings are in contrast with the results of other studies on job satisfaction, which found that pay is positively related to job satisfaction (Bishop et al., 2009; Cantarelli et al., 2015), although the focus of this research is on public administration rather than nursing homes. One possible explanation for this may be in the variation of additional pay options. Although Contract C has a higher base pay, the opportunities for increased pay are relatively low: the pay rate for Sunday and night work and the available overtime hours are each below average values of all contracts and generally below the reference contract values. Another explanation may be that conditions of employment may contribute more significantly than the level of pay to job satisfaction. We discuss this point more fully below.

Facility size also shows a statistically significant effect. When nursing homes have more than 80 beds, employees' motivation is 8 times higher than for nursing homes with fewer than 30 beds. This perception may be due to a more structured approach to human resource management in general in a facility with capacity to serve more patients (Brannon et al., 2002). This finding, however, contrasts with other studies (Banaszak-Holl, Castle, Lin, Shrivastwa, & Spreitzer, 2015; Bishop et al., 2009) that analyzed the relationship using the number of beds per personnel.

## Discussion

Our analysis highlights the finding that the overall satisfaction level of nursing home workers is relatively high. In fact, operators' satisfaction measures, on average, about 80%. The multilevel analysis allows us to evaluate the sources of satisfaction that can be explained by different factors belonging to each level. Accordingly, our analysis has value as a management tool: the results provide insights on characteristics that affect employee incentives that can be used to develop or alter work conditions that yield more satisfied and productive employees.

Our results indicate a relatively small influence of labor agreements on the job satisfaction of nursing aides. This may reflect an impression that employees at that lower skill level may feel they have a limited ability to affect the terms of the agreements. Findings show that nursing aides under the contract with the highest base pay report lower level of

job satisfaction with respect to the reference contract (the lowest base pay). Although it seems to reject Hypothesis 1 (better condition higher satisfaction), this result demonstrates that it is unclear to what extent base pay or other nonmonetary contract labor conditions may be driving job satisfaction. The other labor conditions, particularly related to overtime hours and pay rates, may increase the effective compensation relative to reported base pay; however, there is an associated opportunity cost of incurring additional or less desirable (nights, Sundays, holidays) time at work.

An interesting and unexpected finding in our study relates to the type of employment relationship: temporary workers (including interns, apprentices, or occasional workers) seem to be more satisfied than their colleagues with a permanent contract. This result rejects Hypothesis 2 (permanent workers are more satisfied) and supports the alternative, as we noted some research (De Witte & Naswall, 2003) indicates. This evidence suggests that permanent employees may have different expectations for nonmonetary work conditions and employment environment or organizational climate than do temporary employees. One explanation would be that permanent employees are more experienced than temporary workers and may prefer positions with opportunities for advancement. This would be consistent with the study (Kalisch & Lee, 2014) that finds that more experienced nursing assistants have lower job satisfaction. The limited influence of labor contracts may indirectly support the evidence of other research findings showing that certain job and organizational factors of employment, such as team work, support systems, and participation in governance, may contribute to enhanced job satisfaction, reducing turnover of nursing professionals, although to a lesser extent to nursing aides.

Similarly, our study indicates that non-Italian workers are likely to be more satisfied than their Italian colleagues. This latter finding seems to be confirmed by the occurrence of missing data that most likely reflects the existence of foreign workers who may be concerned about being identified. Hence, higher levels of job satisfaction may depend on the versatility of foreigners or time of work. Indeed, a possible explanation is that, in this period of financial crisis and large rate of unemployment, people who are less skilled or at the boundaries between employed/unemployed may consider the temporary position of nursing aide as a labor market entry opportunity. Alternatively, these individuals may feel rewarded simply to be employed regardless of the working conditions. In this case, the fact of having a job is seen as a need factor that positively affect motivation only to those whose ability to earn any income is at stake. This also implies that organizational climate (team work, culture, and other dimensions) and individual characteristics outweigh the effect that labor contract conditions may play.

The fact that larger organizations are associated with higher level of job satisfaction points out that large facilities



may encounter more effective human resource strategies than small facilities.

All these results may suggest that nursing homes should pay more attention to tailored resource management strategies. Further studies are needed to confirm these effects and overcome some limitations.

One limitation of this study may result from the relatively high number of missing values. We have attempted to impute possible effects related to these values but further study is needed to determine their source and implications with a high degree of confidence.

In addition, more and more scholars look at social, cultural, and relational factors, such as team working, leadership styles, work environment, and safety within organization (Smaldone & Vainieri, 2016), which are not considered in this article. These nonmonetary conditions at both the individual and organizational level, not incorporated in the contract agreements, may have an outsized influence relative to compensation conditions, thus specific analyses on the role played by relational factors may add values to these findings.

## Practice Implications

Our finding that temporary workers show greater job satisfaction than permanent workers suggests possible management strategies. These strategies are independent of any specific labor agreement, which do not specifically address the broader working conditions that may help create organizational climate and environment for the workers.

One response could be simply to expand the number of temporary employees rather than permanent tenure positions. This would likely be no more than a short-term strategy, however, and would need to consider the relative number of temporary versus permanent workers in place, and the long-term effects of increasing this ratio on long run stability of services. Alternatively, management can develop strategies to enhance job satisfaction associated with permanent tenure positions. Some approaches have been suggested in the literature. These include allowing permanent nursing aides greater decision autonomy and providing a system that supports this, such as team work relationships. This could serve to increase the opportunities for nursing aides for advancement to a more senior level. This approach could include creating opportunities for greater autonomy in other aspects of the nursing aide position that make it more satisfying, such as participation in shared governance at the organizational level, as some authors (Chamberlain et al., 2016; Chaudhuri, Yeatts, & Cready, 2013) suggest. Meyer et al. (2014) show that these actions are particularly important in the first 6 months of nursing aide tenure. In addition, consistent assignment of nursing aides as a way to increase job satisfaction and reduce turnover can be an effective management tool (Castle, 2013). Consistent assignment serves management in two ways: improving worker–patient

relationships and the overall level of patient care and reduces costs associated with turnover. Promoting consistency of care by an individual nursing aide for specific patients has the additional benefit of enhancing the reputation of the facility (and, therefore, of the manager). These management practices would be effective for generating greater job satisfaction for those workers with more education as well, by providing opportunities for additional learning, training, and advancement as well as consistent assignments.

For temporary workers and noncitizens (and in particular for this study, non-Italians), the aide's role is an opportunity to move forward in their own life and expectations. However, it also is an opportunity for the organization: the employment of individuals who, as our study highlighted, are more satisfied are likely to bring this to their interactions with patients. In addition, these more satisfied employees bring diversity to the workplace and the associated benefits of flexibility, versatility, energy, and innovation. Even with their high potential, these workers, although temporary, require investment of training and support to provide even minimal care to nursing home patients. To avoid costly turnover where retraining of new (likely also temporary) workers is required and new patient–caregiver relationships must be developed, one management approach would be to provide required skills, mentoring, and support as a pathway to a regular permanent position.

Balancing and integrating permanent and temporary workers, for instance, creating couples or mixed teams, could be an interesting reverse mentoring strategy: temporary employees may learn how organizations and nursing homes function from permanent workers. New experiences of temporary workers may help organizations to innovate, but permanent workers are an important source of stability for the organization and its operation, thus nursing homes can take advantage of both types of workers. To motivate permanent workers in doing their job, organizations could also invest in training outside of the organization. For example, Italian exchange programs between different nursing homes may open new horizons and bring into the organizations innovations or, at the least, a renewed focus in their job.

Finally, consistent with literature on turnover and job satisfaction of nursing assistants, putting in place organizational conditions and workplace support systems that promote trust, respect, and appreciation may promote and increase job satisfaction further, limiting turnover and increasing patient well-being, an important mission of nursing care facilities. We note that larger facilities may have more sophisticated organizational infrastructure and more easily accomplish these strategies than might smaller and independent facilities. The results of our study reinforce the findings in this literature and the likely greater success of management strategies in larger facilities. It is possible, however, that smaller nursing homes may be able to adopt some of these strategies following the lead of larger nursing

homes, so that these may become more widely applied throughout the industry.

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