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**Morality traits for an ideal nurse manager: a multicentre cross-sectional study.**

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## ABSTRACT

**Aims:** To investigate which morality traits are more important for nurses to determine positive opinions of their nurse manager.

**Background:** People selected morality more often than sociability and competence when forming a positive opinion towards an ideal or a newcomer manager.

**Methods:** A multicentre, cross-sectional study was carried out by administering two questionnaires to 775 nurses on the influence of morality, sociability and competence traits on their impression formation processes.

**Results:** Regarding nurses' perceptions about the morality, sociability and competence traits of an ideal nurse manager, the total score for morality, was 20.0; for sociability, it was 14.2; and for competence it was 19.6. For nurses' opinions about a new nurse manager, the total score of the morality section was 16.2, which was very similar to the total score of the competence section (mean=16.1).

**Conclusion:** Morality positively influences nurses' initial impression of an ideal manager, and though it seems to be a necessary condition, it is not sufficient by itself to support the nursing staff's perception toward a new manager.

**Implications for Nursing Management:** Our findings could be useful in a better understanding the role of morality in social perceptions and behavioural consequences of staff nurses toward their nurse manager.

**Keywords:** nursing management, nursing leadership, competence, morality, sociability.

## INTRODUCTION

The healthcare environment aims to be safe and secure for both patients and staff (Fatima et al., 2018). In an increasingly complex healthcare environment, characterised by technological, clinical and administrative evolution, nurse managers represent a pivotal resource to support excellence in nursing care (Albagawi et al., 2017) and to calm the chaos and instability caused by turmoil and changes. Therefore, it is important that both nurse managers and frontline leaders have the appropriate skills to lead in this dynamic context. This aspect assumes additional importance when taking into consideration the role of nurse leaders in the development of a global perspective regarding healthcare and nursing issues (Huston, 2008), as experienced during previous epidemics (de Groot et al., 2013; de Wit et al., 2016; Shih et al., 2009) and the current coronavirus pandemic (2019-nCoV) (Wu et al., 2020; WHO, 2020). In fact, several nursing issues and health threats are now definitely recognised as global issues. In this vein, leadership practice in nursing management is undergoing many changes; therefore, there is an emerging need to develop new management competencies (Heinen et al. 2019; Hoffmann et al., 2020; Kantanen et al., 2017) and, at the same time, to explore more deeply the value of nursing leadership in terms of management skills and human competence. Nurse managers (head nurses and nurse directors) are expected to have both leadership and management competencies, as well as specific skills in human resources (Foster, 2020), organisational strategies, economic and administrative skills to fulfil their responsibilities (Moghaddam et al., 2019). In particular, research evidence has highlighted that the managerial competence of first-line nurse managers is multifactorial and includes three factors contributing to their development: organisational factors, personality traits and individual characteristics of individual managers, and role factors (Gunawan et al., 2018). However, in the literature it has been documented that these skills alone are not enough to determine the success of managerial roles, in fact competence also refers to unobservable human factors, such as attitudes, individual attributes and values (Gunawan & Aunguroch, 2017); competence in ethical skills and human warmth are also needed, with particular attention to moral issues.

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3 The prevailing leadership style of nurse managers promotes the work relationship between  
4 staff nurses and nurse managers in their working unit (Cummings et al., 2018). Several studies have  
5 been conducted to explore the association between relational leadership style and others variables,  
6 such as nursing staff and patient outcomes (Alilyyani et al., 2018; Lotfi et al., 2018) and several  
7 aspects of the nursing organisational work climate (Chen, 2018; Pishgooie et al., 2019). However,  
8 leadership has been mostly defined in a specific management context (Gosling & Mintzberg, 2003),  
9 but it can be also defined by considering a set of individual skills or personality traits, focusing on  
10 the human relation between leaders and followers (Heinen et al., 2018). In the same vein, it is  
11 important to better understand the dynamics underlying the formulation of a social judgment in  
12 building and maintaining the relationship between leaders and followers and, specific in the  
13 healthcare context, between nurses and their nurse managers. Understanding how nursing team  
14 members view and enact in their relationship with their nurse managers, based on their social  
15 judgement and the first information-gathering process, can provide new opportunities for managers  
16 to develop a positive work environment and an effective leadership style that supports the  
17 achievement of organisational goals.  
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### 39 **Background**

41 Recent research in psychology highlighted two fundamental dimensions that underlie social  
42 judgment: 'competence', as a dimension, reflects traits related to perceived skills, intelligence and  
43 efficacy, and 'warmth', as the ability to develop and maintain harmonious social relationships.  
44 Research in this field has clearly established that these are the two universal dimensions of social  
45 judgment at both individual and group levels. In the different phases of the process that shapes  
46 impressions, considerable evidence has suggested that warmth is a primary trait and carries more  
47 weight than competence in human reactions in terms of affective and behavioural aspects (Fiske et  
48 al., 2007; Wojciszke, 2005). Regarding the warmth dimension, evidence on both individual and group  
49 perceptions highlighted that two distinct aspects characterise warmth: morality and sociability (Leach  
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3 et al., 2007). ‘Sociability’ is explained by the association between cooperation and connection with  
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5 others (friendliness, likeability), and ‘morality’ is predominantly related to trustworthiness, sincerity  
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7 and honesty. Although both sociability and morality are prosocial traits and they can be absorbed  
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9 within a single dimension (warmth), they play distinct and different roles at the individual and group  
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11 levels (Leach et al., 2007). In a recent study focused on an intergroup perspective, Brambilla et al.  
12  
13 (2011) showed that when people were asked to select the trait that could help them to decide whether  
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15 a group member deserved their overall positive opinion, they chose morality significantly more often  
16  
17 than sociability and competence. Therefore, moral traits are more important in defining whether  
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19 someone represents an opportunity or a threat, and this aspect is not surprising considering that the  
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21 primary role of the information-gathering process to recognise potential threats. Moreover, other  
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23 studies in the field of psychology found that morality also determines the initial emotional response  
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25 to a new manager; in particular, morality predicts the willingness to help the newcomer manager in  
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27 both the work and social contexts (Pagliaro et al., 2013). To our knowledge, it is not yet clear the  
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29 most predominant trait that shapes the followers’ positive opinion on an ideal manager, when  
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31 considering competence, morality and sociability.  
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## 40 **Aims**

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42 This study aimed to determine which trait (morality, sociability or competence) is more important in  
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44 nursing staff to shaping of a positive opinion regarding an ideal nurse manager. Moreover, we  
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46 explored initial emotional responses, mediated by morality and competence information that guide  
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48 the nurses’ willingness to engage in work and social contexts to help a newcomer nurse manager  
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50 adjust to a new workplace environment.  
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54 By assuming that the identification of threats is a fundamental aspect not only in the initial  
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56 information-gathering process, but also in further phases of impression-forming process (Cuddy et  
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58 al., 2008; Fiske et al., 2007; Wojciszke, 2005), we hypothesised that, in the development of a global  
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evaluative judgement, nursing staff perceptions about the morality traits of an ideal nurse manager are more prominent than sociability and competence.

## **METHODS**

### **Design**

A multicentre, observational, cross-sectional study was carried out between January 2019 and January 2020.

### **Ethical Considerations**

The study was approved by Health Care Directions of four Public Hospitals involved in the study. Anonymity was granted to all participants.

### **Sample Size**

To collect a statistically significant sample size, we adopted a Bernoulli sampling approach (Strand, 1979). The minimum sample size was estimated to be 664 subjects. This number was obtained considering a statistical z-score at 99%, an error  $\epsilon = 5\%$  and hypothesising a prevalence  $\pi$  equal to 50%. The  $\pi$  value is considered equal to 50% because this study is the first explorative research carried out to analyse nursing teams' perceptions about morality, sociability and competence of the ideal nurse manager. Furthermore, considering all participants in the two different questionnaires, there was a great possibility of participant dropout and/or missing data, and consequently the possibility of data loss. To minimise possible statistical biases, the sample size was enlarged to 775 subjects.

### **Statistical Analysis**

The statistical analysis was performed by Matlab statistical toolbox version 2008 (MathWorks, Natick, MA, USA) for Windows at 32 bits. Data are presented as numbers and percentages for categorical variables, and continuous data expressed as the mean  $\pm$  standard deviation (SD) or median with interquartile range (IQR). Cronbach's alpha was performed to test the internal consistency of the questionnaires.

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3 The Shapiro-Wilk test was performed to test the normal distribution of the samples. A  
4 multiple comparison chi-square test was used to define significant differences among percentages. In  
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7 this case, if the chi-square test was significant ( $p < .05$ ), a post hoc z-test was performed to  
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10 individualise the most or less frequent answer.

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12 The Wilcoxon test was used to test for significant difference between two paired samples. It  
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14 is a non-parametric test alternative for the t-test and used when the distribution of the samples is not  
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17 normal.

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19 Correlation analysis, with Spearman correlation coefficient rho, was performed to evaluate  
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21 the degree of association between nurse manager characteristics, such as morality, sociability and  
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23 competence, and independent variables such as age, gender, hospital department, years of work  
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25 experience and educational degree. For this step we considered as dependent variables, morality,  
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27 sociability and competence. These variables were defined considering the total score obtained by  
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29 every subject summing the scores obtained with 7-point Likert scale assigned by every subject to  
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31 *honest, sincere* and *trustworthy* for the morality section, *likeable, warm* and *friendly* for sociability  
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33 and *competent, skilful* and *smart* for the competence section. In addition we assigned the following  
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35 scales: gender, male=0 and female=1; age, [20–30y.o.]=1, [31–40y.o.]=2, [41–50y.o.]=3,  
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37 [51–60y.o.]=4, [61–70y.o.]=5; work experience, 5y.o.=1, [6–10y.o.]=2, [11–20y.o.]=3, >20y.o.=4;  
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39 hospital department, medicine=1, emergency=2, surgery=3, paediatric=4, oncology-haematology=5,  
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41 psychiatry=6, radiology=7, occupational medicine=8 (obtained according to frequency); educational  
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43 degree, regional course=1, undergraduate=2, graduate=3, postgraduate (master's)=4.

#### 44 45 46 47 48 **Participants and Setting**

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51 Four hospitals from two regions of Centre-South of Italy (Abruzzo and Marche) were included in this  
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53 study. Hospitals were selected because they were larger regional hospitals, similar in size (number of  
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55 beds) and followed the same organisational models. No restrictions were applied in terms of hospital  
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57 department or units or for hospitals characteristics (different hospital size measured by number of  
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59 beds). We invited all nurses employed in the four hospitals to participate. The inclusion criteria were:  
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3 nurses with a full time or part-time contract who provided direct patient nursing care in inpatient  
4 settings and who signed the informed consent. Exclusion criteria were: chief nurses, nurse managers,  
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6 nurse directors, nurse educators, all staff nurses who did not agree to participate by signing informed  
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8 consent, and all nurses working in outpatient settings.  
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### 10 11 12 **Data Collection Procedures**

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14 In each participating centre, a trained researcher was responsible for the recruitment by explaining  
15 the study's purpose and procedures to potential participants, specifying that they were being asked to  
16 participate in a study on impression formation. After signing informed consent, two self-reported  
17 paper questionnaires were administered. Participants were asked to express their opinion on an 'ideal'  
18 nurse manager (Questionnaire 1) and then to imagine that a new nurse manager had come to work at  
19 their hospital unit in the near future (Questionnaire 2).  
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### 28 **Instrument Description**

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30 The questionnaires were pre-tested in prior research (Brambilla et al., 2011, 2012; Leach et al., 2007;  
31 Pagliaro et al., 2013) on group impression formation. In this study, both questionnaires showed a  
32 good internal consistency, in fact, Questionnaire 1 had a Cronbach's alpha coefficient of 0.79, while  
33 Questionnaire 2, had a Cronbach's alpha coefficient equal to 0.80.  
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40 These instruments have been detected as the most consistent to explore these phenomena in  
41 management, and they represent a novel approach in nursing leadership research.  
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44 -Questionnaire 1 (Q1) (Brambilla et al., 2011, 2012; Leach et al., 2007): Participants were asked to  
45 indicate the degree to which an 'ideal' nurse manager should have some characteristics in terms of  
46 three specific personality traits (expressed in 9 items): morality (3 items—honest, sincere and  
47 trustworthy); sociability (3 items—likeable, warm and friendly) and competence (3 items—  
48 competent, skilful and smart).  
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54 - Questionnaire 2 (Q2) (Pagliaro et al., 2013): Participants were asked to express their intention to  
55 help a new nurse manager by engaging the newcomer in specific work and social activities. The  
56 questionnaire was divided in two sections, morality and competence, to measure behavioural  
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intention. In the first section, the newcomer was described as a manager with high morality traits (*'he/she is honest, sincere, and trustworthy'*), whereas in the second section, the newcomer was described as a manager with high competence traits (*'he/she is competent, skillful, and smart'*). For each section, participants were asked to respond to the same three questions: (I) *'I would be willing to work together with the new manager'*, (II) *'I would be willing to help/support the new manager by describing procedures, protocols and the work organisation'*, (III) *'I would be willing to spend time with the new manager to show him/her our city'*.

In both questionnaires, all items were rated using a 7-point Likert scale: 1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree; 5 = somewhat agree; 6 = agree; 7 = strongly agree. In addition, both for Q1 and Q2, morality, sociability and competence traits were defined the total scores (ranging from 3 to 21), considering the cumulative scores obtained from all items on each trait; an increase of score indicates an increase in the level of morality, sociability and competence.

Finally, we also collected sociodemographic information: current health structure and hospital department, age, gender, educational degree, total years of work experience and years of work experience in the current department.

## RESULTS

### Characteristics of the Study Sample

Of total of 1191 eligible nurses from all hospitals, only 775 had agreed to participate and met our inclusion criteria (65.07% response rate). Most participants were male (55.4%), aged between 41 and 50 years (40.3%) with over 20 years of work experience (55.4%).

In Table 1, we report the overall characteristics of the sample.

*(Table 1).*

***Questionnaire 1: Nurses' perceptions regarding morality, sociability and competence traits of an ideal nurse manager***

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3 Table 2 shows the opinions regarding the preferred characteristics of the nurse manager. Overall, the  
4 total score for the morality was 20.0 of a possible 21 ( $\pm 1.9$ ); for sociability, it was 14.2 ( $\pm 4.4$ ), while  
5 for the competence, it was 19.6 ( $\pm 2.0$ ). We observed in the morality section, that the less frequent  
6 answers for *honest*, *sincere* and *trustworthy*, were from 'strongly disagree' to 'somewhat agree',  
7 while the answer with more frequent score was "strongly agree' (80.6%, 70.6%, and 80.9%,  
8 respectively with  $p < 0.0001$  for all). In addition, the descriptor 'agree' was significantly present in  
9 *sincere* only (19.2%,  $p = .0003$ ).

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19 Regarding the sociability section, we observed that descriptors 'neither agree nor disagree'  
20 and 'somewhat agree' were associated with answers most frequently, except for the adjective *likeable*  
21 where among answers more frequent descriptors 'agree' and 'strongly agree' were included.

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Finally, regarding the competence section, we observed that the less frequent answers for  
*competent*, *skilful* and *smart* were referred to descriptors between 'strongly disagree' and 'agree'  
except for *smart*, where less frequent answers referred to descriptors from 'strongly disagree' to  
'neither agree nor disagree. ". The most frequent answer was 'strongly agree', except for *smart*, for  
which the most frequent descriptor was 'agree'.

(Table 2)

**Questionnaire 2: Nurses' perceptions about morality and competence traits of newcomer nurse managers**

In Table 3, we reported the nurses' opinions about a new nurse manager. The total score of the  
morality section was 16.2 ( $\pm 3.1$ ), which was similar to the total score of the competence section,  
16.1 ( $\pm 3.3$ ). We observed in the morality section, particularly for both *honesty* and *sincerity*,  
significantly less frequent answers with descriptors from 'strongly disagree' to 'neither agree nor  
disagree', while descriptors 'agree' and 'strongly agree' were more frequent. Instead, for  
*trustworthiness*, the answers 'neither agree nor disagree' and 'somewhat agree' were more frequent  
in comparison to others.

Regarding the *competence section*, particularly for both *competent* and *skilful*, we observed a significantly less frequent answers with descriptors from “‘strongly disagree’ to ‘neither agree nor disagree’, while the descriptors ‘agree’ and ‘strongly agree’ were more frequent. Instead, for *smart*, the descriptors ‘neither agree nor disagree’ and ‘somewhat agree’ were more frequent in comparison to the others.

**(Table 3)**

***Differences for morality and competence sections between Questionnaires 1 and 2 and correlational analysis***

In addition to testing whether there were significant differences for the morality and competence sections between Q1 and Q2, we reported the mean and median values of morality, sociability and competence (Table 4).

Using the Wilcoxon test, we observed that for the morality variable, there was a significant difference between Q1 and Q2 (median: 21>17,  $p<.0001$ ) analogous for the competence variable (median: 20>17,  $p<.0001$ ) (Table 4).

**(Table 4)**

Finally, Table 5 illustrates the correlation analysis obtained with Spearman correlation coefficient rho to test the association between nurse manager characteristics and independent variables, such as age, gender, hospital department, years of work experience and educational degree.

**(Table 5)**

Table 5 shows that for Q1, there was a significant negative correlation between morality and gender ( $\rho=-0.11$ ,  $p=.0019$ ) and between morality and educational degree ( $\rho=-0.07$ ,  $p=.042$ ), while a positive correlation between morality and years of work experience was found ( $\rho=0.106$ ,  $p=.0032$ ). For sociability, a significant positive correlation was found with age ( $\rho=0.09$ ,  $p=.013$ ) and years of work experience ( $\rho=0.10$ ,  $p=.0074$ ), while a negative correlation was found with educational degree ( $\rho=-0.12$ ,  $p=.0011$ ). Finally, regarding the competence variable, a significant negative correlation was found with age ( $\rho=-.104$ ,  $p=.0037$ ) and years of work experience ( $\rho=-$

0.10,  $p=0.0315$ ). Regarding Q2, no significant correlations were found between morality and competence with age, gender, hospital department, years of work experience and educational degree.

## DISCUSSION

The primary objective of the current study was to explore which characteristics an 'ideal' and a 'new' nurse manager should have in determining the social judgment by the nursing teams; morality was considered the main trait influencing the formation of nurses' impressions, if compared with sociability and competence. In particular, correlational analysis confirmed that morality was the variable most affecting the positive opinion of nurses.

However, we observed statistically significant differences in values both for morality and competence variables between Q1 and Q2; in fact, our results showed that in determining the social judgments about an 'ideal' nurse manager (Q2), morality traits played an important, but not predominant, role over competence.

### **Morality, Sociability and Competence Traits of an Ideal Nurse Manager: Nurses' Perceptions**

We observed the prominence of morality over other dimensions (sociability and competence) in determining the social judgments of nurses about an 'ideal' nurse manager. In particular, regarding nurse manager's morality traits, nurses rated two personality traits as most important for initial impression formation: honesty and trustworthiness. Despite these results, we cannot assert that competence is irrelevant; in fact, we observed an equally high total score for competence, although less than morality traits. In agreement with previous research (Pagliaro et al., 2012, 2013), we found the effect of sociability and competence on initial impression formation was weaker than morality.

The result related to sociability is not surprising, but it is interesting to note that in the healthcare organisational context, competence is often expected to play a pivotal role and to be more important with respect to morality in impression formation. In fact, from an organisational point of view, nurse managers are expected to be competent in several task performances, organisational strategies and economic aspects as well as requiring certain specific knowledge (Kantanen et al., 2017; Foster,

2020). Nevertheless, morality is not an organisational expectation but a followers' expectation to identify themselves in the leader. Conceptualising perceived morality in terms of honesty, sincerity and trustworthiness of the organisation is related to specific implications for the organisation's ability to succeed in their attempts to achieve a moral image (Barreto et al., 2011). Organisations expect managers to perform according to the organisational goals from an efficiency perspective, while the followers expect the manager to fit into the team and lead it within a broader vision. Likewise, morality could be an essential trait from an individual or group perspective but, not necessarily from an organisational perspective. However, our findings suggest that nurses, in accordance with previous psychology literature (Brambilla et al., 2011; Pagliaro et al., 2013), are more prone to positively evaluate morality-related personality traits rather than competence-related information in the initial impression formation of social judgment, which is considered a priority in establishing positive relations with their nurse manager at work.

### **Morality and Competence Traits of a Newcomer Nurse Manager: Nurses' Perceptions**

Contrary to previous psychological studies (Pagliaro et al., 2013), our results did not confirm the hypothesis that morality could be the most important trait related to a staff nurse's willingness to help and support a new nurse manager. Morality itself seems to be a necessary condition but not sufficient alone to support nursing staff's positive perception toward a new manager. Morality traits overlap with the concept of authentic leadership, which encompasses self-awareness, relational transparency, balanced processing and internalised moral perspective (Lee et al., 2019). In this vein, morality could be a part of a broader concept of leadership, which could better support a comprehensive view of followers' impression formation toward the new manager.

### **Correlation between Morality, Competence and Sociodemographic Variables**

Regarding the correlation between sociodemographic variables and nurses' response on Q1, results showed that for the initial impression on an 'ideal' nurse manager a high level of morality was correlated to male gender, low educational degree and high working experience in terms of years of work in the same organizational unit (OU). A high level of sociability was correlated to low

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3 educational degree, high working experience in terms of years of work in the same OU and older age.  
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5 Whereas, competence was correlated with younger age and low work experience. Prior research has  
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7 suggested that nurses' assessment of their manager's competencies was associated with the nurses'  
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9 work experience (Lehtonen et al., 2018). Particularly, according to previous findings (Tomietto et al.,  
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11 2015), the youngest nurses focused on the acquisition of competence in order to better adjust in the  
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13 organisational setting. In this way, competence-based feedback by the leader could be mostly  
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15 appreciated in the earliest phases of professional career. It is possible that more experienced nurses  
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17 are more suitable to appreciate team-oriented traits, such as morality and sociability, while younger  
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19 nurses need more time to develop a value-oriented vision (morality) or a team-building vision  
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21 (sociability) and they are more oriented in searching competence-based feedback by the leader. A  
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23 longitudinal design could better verify this hypothesis, in order to catch an evolution over time of  
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25 nursing staff's perception of a nurse manager.  
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31 For only the variable 'hospital department' did we not observe a significant association in  
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33 each of the three personality traits (morality, sociability and competence) measured. This could be  
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35 explained by considering that the situation proposed and examined in this study (a general situation  
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37 in which nurses were asked to express their opinion on an 'ideal' nurse manager) are quite general in  
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39 organisational contexts and not specific to the type of setting or, in particular, to different OUs of the  
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41 various department. Furthermore, morality, sociability and competence are human traits that are  
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43 independent of the context, but they rather belong to human functioning and perception.  
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47 Regarding Q2, in which nurses were asked to indicate the extent to which they would be  
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49 willing to support a newcomer nurse manager with high morality competence traits, no significant  
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51 correlations were found between morality and competence and sociodemographic variables.  
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## 54 55 56 **LIMITATIONS**

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58 Due to the lack of previous research on the topic of this study, there is a need for further development.  
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60 The first limitation is related to the generalisability of our results to a larger population. Data were

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3 collected from a sample of Italian nurses; therefore, findings must be interpreted with caution and  
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5 further studies should be conducted on a larger sample of nurses from several Italian regions (North  
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7 and South Italy) and in different countries to have a deep understanding of the examined phenomenon.  
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10 The second limitation is that our study did not include specific measures of nursing cultural  
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12 variables; however, nurses' expectations of their nurse managers could also be affected by their  
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14 cultural background (Ishii et al., 2020).  
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17 Finally, longitudinal design could also better test the evolution of leadership style and team-  
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19 leader interaction over time.  
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## 22 23 24 **CONCLUSIONS**

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26 Morality, with respect to sociability and competence, is the variable that, according to nurses,  
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28 positively influence their initial impression and social judgment with respect to an ideal manager.  
29  
30 Instead, our findings did not confirm the role of morality as the main influencing trait of staff nurse's  
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32 willingness to help and support a new nurse manager.  
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## 37 38 **IMPLICATIONS FOR NURSING MANAGEMENT**

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40 During the past decade, several studies in social psychology have explored the association between  
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42 morality and the formation of impressions about others at the interpersonal and group levels and  
43  
44 highlighted the pivotal role of morality in determining the social judgment of individuals and groups  
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46 (Brambilla et al., 2011, 2012; Leach et al., 2007; Pagliaro et al., 2013). Building on previous research  
47  
48 in the psychology literature and by considering the nursing working group as a social group in which  
49  
50 members share norms and values, we explored the impact of information relevant to morality traits  
51  
52 of an 'ideal' nurse manager, compared to information about sociability and competence. To our  
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54 knowledge, this study analysed for the first time which trait (morality, competence and sociability) is  
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56 more important in nursing teams to shape positive opinions regarding an ideal and a new nurse  
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58 manager.  
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3 Our findings could be useful in gaining a better understanding of the role of morality in social  
4 perceptions and behavioural consequences of staff nurses toward their nurse managers. Relatedly,  
5 these aspects assume more importance in strategically promoting synergy between nurses and nurse  
6 managers and to develop positive work relationships and environments, which are essential to  
7 promoting commitment, cooperation, trust and engagement within the working group of an OU. As  
8 highlighted in previous research in the field of psychology, trust and employee engagement are  
9 influenced by ethical behaviours of leaders within an organisation (Stouten et al., 2012). Particularly,  
10 being a moral manager instead just a moral person, plays a pivotal role in the development and  
11 sustainment of an ethical vision and moral values in work environments (Engelbrecht et al., 2017).  
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24 In addition, the results of this study could be useful in the development of continuing  
25 education through formal training courses specifically tailored for nurse managers and focused on  
26 formal communication strategies at the organisational level, related to personal characteristics of  
27 nurse managers that are considered crucial to the social impression formation at the ward level.  
28 Moreover, it could be interesting to explore the role of morality and competence not only in the in  
29 the initial impression formation of nurses toward their nurse managers, but also to determine if  
30 morality information could be a predictor of nurses' behavioural intentions towards different  
31 organisational variables in the nursing environment, such as conflict management or negotiation  
32 strategies.  
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**Tables**

**Table 1.** *General characteristics of the 775 nurses.*

<b>Parameters</b>	<b>% (N.)</b>
Overall sample	775
Region	
Abruzzo	62.7% (486)
Marche	37.3% (289)
Gender (M)	55.4% (429)
Age (years)	
[20-30]	9.3% (72)
[31-40]	23.2% (180)
[41-50]	40.3% (312)
[51-60]	26.2% (203)
[61-70]	1.0% (8)
Work experience (years)	
[0-5]	10.3% (80)
[6-10]	7.7% (60)
[11-15]	12.6% (98)
[16-20]	13.9% (108)
[21-25]	25.9% (201)
[26-30]	20.3% (157)
[31-35]	5.9% (46)
[36-40]	3.2% (25)
Educational degree	
Regional Course	34.7% (269)
Undergraduate	12.6% (98)
Graduate	45.7% (354)
Post graduate (Master)	7.0% (54)
Hospital Department	
Emergency	26.8% (208)
Oncology-Haematology	5.5% (43)
Medicine	31.9% (247)



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Occupational medicine	0.1% (1)
Paediatric	9.0% (70)
Psychiatry	3.1% (24)
Radiology	1.5% (12)
Surgery	21.9% (170)

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**Table 2.** Nurses' opinion on preferred characteristics of the nurse manager, about morality, sociability and competence.

Nurses' opinion about nurse manager	7-point Likert scale % (n.)	Multivariate analysis
<i>Morality</i>		
Honest	Score 1: 0.1(1)	p<.0001* (C)
	Score 2: 0.3(2)	Score1***, p<.0001(Z)
	Score 3: 0.3(2)	Score2***, p<.0001(Z)
	Score 4: 1.8(14)	Score3***, p<.0001(Z)
	Score 5: 3.4(26)	Score4***, p<.0001(Z)
	Score 6: 13.5(105)	Score5***, p<.0001(Z)
	Score 7: 80.6(625)	Score7**, p<.0001(Z)
Sincere		p<.0001* (C)
	Score 1: 0.5(4)	Score1***, p<.0001(Z)
	Score 2: 0.1(1)	Score2***, p<.0001(Z)
	Score 3: 0.6(5)	Score3***, p<.0001(Z)
	Score 4: 3.5(27)	Score4***, p<.0001(Z)
	Score 5: 5.4(42)	Score5***, p<.0001(Z)
	Score 6: 19.2(149)	Score6**, p=.0003(Z)
Score 7: 70.6(547)	Score7**, p<.0001(Z)	
Trustworthy		p<.0001* (C)
	Score 1: 0.3(2)	Score1***, p<.0001(Z)
	Score 2: 0.0(0)	Score2***, p<.0001(Z)
	Score 3: 0.3(2)	Score3***, p<.0001(Z)
	Score 4: 1.3(10)	Score4***, p<.0001(Z)
	Score 5: 3.1(24)	Score5***, p<.0001(Z)
	Score 6: 14.2(110)	Score7**, p<.0001(Z)
Score 7: 80.9(627)		
<i>Sociability</i>		
Likeable		p<.0001* (C)
	Score 1: 3.1(24)	Score1***, p<.0001(Z)

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2		Score 2: 4.1(32)	Score2***, p<.0001(Z)
3		Score 3: 8.4(65)	Score3***, p<.0001(Z)
4		Score 4: 22.5(174)	Score4**, p<.0001(Z)
5		Score 5: 23.7(184)	Score5**, p<.0001(Z)
6		Score 6: 17.3(134)	Score6**, p=.0303(Z)
7		Score 7: 20.9(162)	Score7**, p<.0001(Z)
8			
9	Warm		p<.0001* (C)
10		Score 1: 4.4(34)	Score1***, p<.0001(Z)
11		Score 2: 6.2(48)	Score2***, p<.0001(Z)
12		Score 3: 12.4(96)	Score4**, p<.0001(Z)
13		Score 4: 22.0(163)	Score5**, p<.0001(Z)
14		Score 5: 23.7(184)	
15		Score 6: 16.1(125)	
16		Score 7: 16.1(125)	
17			
18	Friendly		p<.0001* (C)
19		Score 1: 4.1(32)	Score1***, p<.0001(Z)
20		Score 2: 5.8(45)	Score2***, p<.0001(Z)
21		Score 3: 14.3(111)	Score4**, p<.0001(Z)
22		Score 4: 23.5(182)	Score5**, p<.0001(Z)
23		Score 5: 21.7(168)	
24		Score 6: 13.8(107)	
25		Score 7: 16.8(130)	
26			
27	<i>Competence</i>		
28			
29	Competent		p<.0001* (C)
30		Score 1: 0.4(3)	Score1***, p<.0001(Z)
31		Score 2: 0.3(2)	Score2***, p<.0001(Z)
32		Score 3: 0.0(0)	Score3***, p<.0001(Z)
33		Score 4: 0.3(2)	Score4***, p<.0001(Z)
34		Score 5: 1.3(10)	Score5***, p<.0001(Z)
35		Score 6: 7.9(61)	Score6***, p<.0001(Z)
36		Score 7: 89.9(697)	Score7**, p<.0001(Z)
37			
38	Skilful		p<.0001* (C)
39		Score 1: 0.3(2)	Score1***, p<.0001(Z)
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	Score 2: 0.3(2)	Score2***, p<.0001(Z)
	Score 3: 0.0(0)	Score3***, p<.0001(Z)
	Score 4: 0.5(4)	Score4***, p<.0001(Z)
	Score 5: 2.2(17)	Score5***, p<.0001(Z)
	Score 6: 8.6(67)	Score6***, p<.0001(Z)
	Score 7: 88.1(683)	Score7**, p<.0001(Z)
Smart	Score 1: 1.2(9)	p<.0001* (C)
	Score 2: 1.3(10)	Score1***, p<.0001(Z)
	Score 3: 3.5(27)	Score2***, p<.0001(Z)
	Score 4: 9.2(71)	Score3***, p<.0001(Z)
	Score 5: 14.1(109)	Score4***, p=.0001(Z)
	Score 6: 25.4(197)	Score6**, p<.0001(Z)
	Score 7: 45.4(352)	Score7**, p<.0001(Z)

\* significant test ( $p<.05$ );  $p=p$ -value; C= multi-comparison chi-square test; Z= post hoc Z test; \*\* = significant more frequent; \*\*\* = significant less frequent. Scores: 1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree; 5 = somewhat agree; 6 = agree; 7 = strongly agree.

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**Table 3.** Nurses’ opinion on preferred characteristics of a new nurse manager, about morality and competence.

Nurses’ opinion about new nurse manager	7-point Likert scale % (n.)	Multivariate analysis
<i>Morality</i>		
Honest	Score 1: 0.6(5) Score 2: 1.0(8) Score 3: 1.5(12) Score 4: 5.7(44) Score 5: 12.1(94) Score 6: 28.1(218) Score 7: 50.8(394)	p<.0001* (C) Score1***, p<.0001(Z) Score2***, p<.0001(Z) Score3***, p<.0001(Z) Score4***, p=.0001(Z) Score6**, p<.0001(Z) Score7**, p<.0001(Z)
Sincere	Score 1: 0.8(6) Score 2: 0.9(7) Score 3: 1.5(12) Score 4: 5.3(41) Score 5: 13.0(101) Score 6: 31.0(240) Score 7: 47.5(368)	p<.0001* (C) Score1***, p<.0001(Z) Score2***, p<.0001(Z) Score3***, p<.0001(Z) Score4***, p=.0001(Z) Score6**, p<.0001(Z) Score7**, p<.0001(Z)
Trustworthy	Score 1: 15.4(119) Score 2: 9.9(77) Score 3: 12.6(98) Score 4: 20.5(159) Score 5: 18.6(144) Score 6: 14.3(111) Score 7: 8.6(67)	p<.0001* (C) Score2***, p=.0011(Z) Score7***, p<.0001(Z) Score4**, p=.0001(Z) Score5**, p=.0018(Z)
<i>Competence</i>		

1			
2	Competent	Score 1: 0.6(5)	p<.0001* (C)
3		Score 2: 1.0(8)	Score1***, p<.0001(Z)
4		Score 3: 2.1(16)	Score2***, p<.0001(Z)
5		Score 4: 6.3(49)	Score3***, p<.0001(Z)
6		Score 5: 12.8(99)	Score4***, p=.0001(Z)
7		Score 6: 29.8(231)	Score6**, p<.0001(Z)
8		Score 7: 47.4(367)	Score7**, p<.0001(Z)
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10	Skilful	Score 1: 0.9(7)	p<.0001* (C)
11		Score 2: 1.2(9)	Score1***, p<.0001(Z)
12		Score 3: 2.1(16)	Score2***, p<.0001(Z)
13		Score 4: 6.3(49)	Score3***, p<.0001(Z)
14		Score 5: 13.8(107)	Score4***, p=.0001(Z)
15		Score 6: 34.2(265)	Score6**, p<.0001(Z)
16		Score 7: 41.5(322)	Score7**, p<.0001(Z)
17			
18	Smart	Score 1: 15.7(122)	p<.0001* (C)
19		Score 2: 9.5(74)	Score2***, p=.0004(Z)
20		Score 3: 13.4(104)	Score7***, p=.0001(Z)
21		Score 4: 17.4(135)	Score4**, p=.0220(Z)
22		Score 5: 17.9(139)	Score5**, p=.0076(Z)
23		Score 6: 16.5(128)	
24		Score 7: 9.2(71)	

\* significant test ( $p < .05$ );  $p = p$ -value; C= multi-comparison chi-square test; Z= post hoc Z test; \*\* = significant more frequent; \*\*\* = significant less frequent.

Scores: 1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree ; 5 = somewhat agree; 6 = agree; 7 = strongly agree.

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60**Table 4.** Morality, Sociability and Competence variables description.

Variables	Mean±SD	Total score	
		Median (IQR)	Test on Normal distribution
Morality Q1	20.0±1.9	21.0 (19.0-21.0)	reject Normality: p<.0001* (SW)
Competence Q1	19.6±2.0	20.0 (19.0-21.0)	reject Normality: p<.0001* (SW)
Sociability Q1	14.2±4.4	15.0 (12.0-18.0)	reject Normality: p<.0001* (SW)
Morality Q2	16.2±3.1	17.0 (15.0-18.0)	reject Normality: p<.0001* (SW)
Competence Q2	16.1±3.3	17.0 (14.0-18.0)	reject Normality: p<.0001* (SW)

\* significant test ( $p<.05$ );  $p$ =p-value; SW =Shapiro-Wilk testfor Normal distribution;  
*IQR = Interquartile Range, SD = standard deviation; Q1 =questionnaire 1; Q2 =questionnaire 2.*  
 Scores were obtained considering total scores of the all items included.

**Table 5.** Correlation analysis about relationship between Morality, Sociability and Competence variables and independence variables such as sociodemographic data.

<b>Questionnaire 1 Variables</b>	<b>Correlation test rho (p-value)</b>
<i>Morality / Gender</i>	<b>-0.11(0.0019)*</b>
<i>Morality / Age (years)</i>	0.05(0.15)
<i>Morality / Hospital Department</i>	-0.06 (0.11)
<i>Morality / Work experience (year)</i>	<b>0.106(0.0032)*</b>
<i>Morality / Educational degree</i>	<b>-0.07(0.042)*</b>
<i>Sociability / Gender</i>	0.05(0.18)
<i>Sociability / Age (years)</i>	<b>0.09 (0.013)*</b>
<i>Sociability / Hospital Department</i>	0.06(.10)
<i>Sociability / Work experience (year)</i>	<b>0.10(.0074)*</b>
<i>Sociability / Educational degree</i>	<b>-0.12(.0011)*</b>
<i>Competence / Gender</i>	-0.04(0.31)
<i>Competence / Age (years)</i>	<b>-0.104(0.0037)*</b>
<i>Competence / Hospital Department</i>	-0.02(0.55)
<i>Competence / Work experience (year)</i>	<b>-0.10(0.0315)*</b>
<i>Competence / Educational degree</i>	0.05(0.16)
<b>Questionnaire 2 variables</b>	<b>Correlation test rho (p-value)</b>
<i>Morality / Gender</i>	0.003(0.93)
<i>Morality / Age (years)</i>	0.06(0.07)
<i>Morality / Hospital Department</i>	0.02(0.57)
<i>Morality / Work experience (year)</i>	0.05(0.14)
<i>Morality / Educational degree</i>	-0.01(0.81)
<i>Competence / Gender</i>	0.01(0.77)
<i>Competence / Age (years)</i>	0.02(0.62)
<i>Competence / Hospital Department</i>	0.05(0.17)
<i>Competence / Work experience (year)</i>	0.02(0.64)
<i>Competence / Educational degree</i>	0.02(0.57)
* = significant test ( $p < .05$ )	