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Effect of social discipline and work consciousness on nurses' productivity by considering mediating role of organizational commitment in public hospitals of Tehran University of Medical Sciences

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#### **Abstract:**

Aim and literature: Nowadays, organizations have found that their most important capitals are human resources which are an important factor in the success and development of any organization and any other organization isn't able to achieve all of its goals without them. Therefore, the main aim of the present study is analyzing the effect of social discipline and work consciousness on nurses' productivity by considering mediating role of organizational commitment.

Methodology: The present research is an applied- descriptive study in terms of gathering data and it is a field study. It is also a casual- survey study in terms of the relationship between research variables. Its most important benefit is the ability of generalizing the results which was done in 1396 periodically. The statistical population of this study included the employed nurses of hospitals of Tehran University of Medical Sciences. The sample size was 220 persons which were selected by a cluster – multistage sampling method. The standard questionnaire



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was used for gathering information. Its validity and reliability was confirmed. Pearson correlation test and structural equation modeling were used for analyzing the relationship between variables, measuring the fitness of the research model and testing the hypotheses using SPSS 22 and Amos22 software.

Findings: results showed that the research model has a good fitness. Social discipline has a significant effect on nurses' productivity. Work consciousness has a significant effect on nurses' productivity. Organizational commitment also facilitates the relationship between social discipline and work consciousness.

Conclusion: The results showed that organizational commitment has potential and serious effects on the organizational performance, so neglecting it is harmful for the organization and it is costly.

**Keywords:** social discipline, work consciousness, nurses' productivity, organizational commitment.



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#### **Introduction:**

Nowadays, organizations have found that their most important capitals are human resources which are an important factor in the success and development of any organization and any other organization isn't able to achieve all of its goals without them. Emergence and domination of this viewpoint that the success and effectiveness of organizations depends on the proper guidance of resources, especially human resources has led to paying considerable attention to the employee's behavior such as their performance in the recent years. What can we suggest explicitly is that organizational life depends on the proper performance of the employees and we can train them with effective performance management, highlighting their strengths and weaknesses and pursuing organizational goals and ideals (2). Organizational environment plays an important role for nurses. Nowadays, Nurses may have a lot of job options, so the work environment is an important factor for adoption and/or job retention. The workplace environment quality may determine the motivation of the nurses, their future performance and their productivity simply. Therefore, treatment department managers should consider new strategies of recruiting and retaining the best of the people who have the best skills and talents in the hospital. High salaries and benefits may have a potential impact on attracting nurses. However workplace environment quality has a stronger effect on the capabilities of nurses in retaining their talents. The most important factors of the work environment that should be considered are as following: nurses' participation, productivity, ethics, etc. (6)

Addressing the issue of nurses' productivity is one of the main concerns of managers of the treatment sector by considering the importance of nurses in a hospital and its role in the growth and realization of hospital goals. Productivity is an intellectual view which always tries to improve what is already available. The main goal of each hospital is achieving optimal productivity. It means that paying attention of the hospital manager to the mental and physical health of the nurses and the treatment staff leads to a situation where nurses use their full cognitive, emotional and behavioral capabilities in order to achieve the best level of productivity without fear of punishment (2). As a result, one of the issues of organizational behavior that has attracted attention to itself is work consciousness. Work consciousness is defined as an inner force that guides the individual or society towards good and proper behaviors. This power or authority which is in the heart or within human beings affects the way of thinking and behavior through a complex process (1). Work consciousness points to the



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sense of responsibility, commitment and fulfillment of the assigned duties and responsibilities. On the other hand, work consciousness is a self-regulating mechanism of accomplishing tasks by individuals who do their work under the control of their nurse manager directly or indirectly. On the other hand, work consciousness is heart satisfaction, commitment and adherence to what people do, so that if the supervisor does not watch their activities, they themselves realize the shortcomings of their duties (5). Another variable which can be closely related to productivity is social discipline. Vazifehdoost et al concluded in their research that social discipline was effective in increasing employee productivity and customer satisfaction and reducing administrative costs (4). Although the relationship between the two issues of work consciousness and social discipline has been simple and direct in the organization and it seems that work consciousness leads to social discipline and social discipline increases the work consciousness in the organization conversely but this relationship is not considered in organizational field research and social studies directly. Of course, there have been done some researches about increasing the productivity and production through the promotion of morale and morality in the organization. Commitment to an organization is related to the quality of the organization's relationships with employees reasonably theoretically. When nurses are satisfied of their work environment and relationships within the organization, they are committed to that organization generally (1). Commitment and adherence as satisfaction are two close attitudes that affect important behaviors such as displacement and absenteeism. Commitment and adherence can also have positive and various outcomes. The nurses who have commitment and adherence have more discipline in their work, they stay in the hospital more than others and they work more than others. Therefore, nurse managers and managers of the treatment sector should be able to increase nursing commitment and adherence in various ways and retain it in various ways (8). Since there has been done little research about studying the effect of social discipline and work consciousness on nurses' productivity by considering mediating role of organizational commitment, this research has been done in order to study the effect of these issues on nursing cadre of Shafa hospital.

#### **Methodology:**

The present research is an applied- descriptive study in terms of gathering data and it is a field study. It is also a casual- survey study in terms of the relationship between research variables. Its most important benefit is the ability of generalizing the results. The statistical population of



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this study included all of the employed nurses of hospitals of Tehran University of Medical Sciences. Subjects of book of Azar et al were used for determining the sample size. They suggested 200 to 400 samples for the models included 10 to 15 indicators in the literature of structural equation model generally. They also suggested that MIS researchers have achieved a temporal rule of thumb in order to determine the minimum sample size since the early 1990s. It needs 10 observable cases per index (rule 10). The sample size should be 200-400 which will be 220 cases in accordance to the rule 10 according to the number of indexes of this study which is equal to 22 but 250 questionnaires were distributed in order to be more reliable. Cluster sampling method was used for selecting the sample.

Standard questionnaire was used for gathering information. Human resources productivity questionnaire of Hersey and Goldsmith (1980) has 26 items and 7 components of ability (1-3) , understanding and recognition (4-7), organizational Support (8-11), motivation (12-15), feedback (16-19), Validity (20-23), compatibility (24-26) which are scored based on five score Likert spectrum from strongly disagree to strongly agree. Social discipline questionnaire of Frootani and Bohrani (2007) has 10 items which are scored based on five score Likert spectrum from strongly disagree to strongly agree. Allen and Meyer's organizational commitment questionnaire (1990) has 24 items and 3 components of affective commitment (22-19-16-13-10-7-4-1), continuous commitment (23-20-17-14-11-8-5-2) and normative commitment (24-21-18-15-12-9-6-3) which are scored based on five score Likert spectrum from strongly disagree to strongly agree. Work consciousness questionnaire of Costa and Mc Crae (1992) has 16 items and 2 components of reliability (1-8) and success orientation (9-16) which are scored based on five score Likert spectrum from strongly disagree to strongly agree. Content validity and convergent validity have been used to assess validity and Cronbach's alpha method and the composite reliability have been used for testing the questionnaires' reliability. The reliability coefficient of the research variables is shown in Table 1.

(Table1: Cronbach's alpha coefficients and reliability and validity of research variables)

| AVE   | CR    | Cronbach's alpha | Index                |
|-------|-------|------------------|----------------------|
|       |       | coefficient      |                      |
| 0.693 | 0.859 | 0.844            | nurses' productivity |
| 0.714 | 0.742 | 0.753            | Organizational       |
|       |       |                  | commitment           |



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| 0.831 | 0.780 | 0.804 | Work consciousness |
|-------|-------|-------|--------------------|
| 0.550 | 0.821 | 0.766 | Social discipline  |

The closer the Cronbach's alpha index to 1, the more internal consistency between more questions, so the questions will be more homogenous. Cronbach's alpha index showed that the reliability coefficient (45%) is low, the reliability coefficient (75%) is moderate and the reliability coefficient (95%) is high. The values which are above 0.7 are considered desirable in many sources. Composite reliability is a criterion in which the structures are not calculated based on absolute terms but also they are calculated based on the correlation between structures than Cronbach's alpha index. CR values which have a standard value (0.7) indicate the suitability of this criterion. AVE criterion indicates the mean of common variance between each structure and its own indicators. If AVE is the standard value (0.5), this criterion is appropriate. As it is shown in table 1, research indicators have an optimal reliability.

#### Research findings:

Results of demographic profile of the sample members showed that 60% of them were women and 40% of them were men. 2% of the members had associate of arts, 78% of them had bachelor degrees, 20% of them had Master of Arts or sciences in terms of educational degrees. 62 percent of them had a formal employment contract and 38 percent of them were contracted. The average age of the participants of this study was 37 years.

Data were analyzed by SPSS22 and AMOS22 software after gathering data through questionnaire. Normal distribution of variables was studied by Kolmogorov smirnov, the relationship between variables was studied by correlation test, status of variables was studied by t-test and the research hypotheses were studied by structural equation models. The factors which were obtained from the Shapiro-Wilk test or the Kolmogorov smirnov test are used to ensure that the data is normal. When we are evaluating the normality of data, we test the null assumption based on the normal distribution of data at error rate of 5%. Therefore, if the test statistic is > 0.05, there is no reason of rejecting the null assumption which is based on normal data. In the other word, the distribution of data will be normal. Results of this test are shown in table2.



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(Table2: Results of Kolmogorov smirnov test)

| Sig   | Kolmogorov smirnov | Indices                   |
|-------|--------------------|---------------------------|
| 0.034 | 1.428              | nurses' productivity      |
| 0.014 | 1.757              | Organizational commitment |
| 0.124 | 1.722              | Social discipline         |
| 0.012 | 1.334              | Work consciousness        |

The significance level (sig) of research indices is >0.05 and since the results of Kolmogorov smirnov test confirmed the normality of the data, parametric statistics were used to test the hypotheses and other statistical tests. Pearson correlation test was also used to study the relationship between indices in this study. If the population correlation coefficient is  $\rho$  and the sample size correlation coefficient is n out of r, then may be r is randomized. The significant correlation coefficient test is used for achieving this goal. This test investigates whether both of variables are randomized and independent or not. In the other word, is the population correlation coefficient zero or not. This coefficient calculates the correlation between two interval or ratio variables. Its value is between -1 and +1. If it is a positive value, it means that the changes of the two variables are in the same way. When a variable increases, another variable also increases and conversely, if the r-value is negative, it means that the changes of the two variables are against each other. When a variable increases, another variable decreases. If the value is equal to zero, there is no relationship between two variables. Result of Pearson correlation coefficient test are shown in table 3.

(Table3: Results of Pearson correlation coefficient test)

| Correlation | Significant | Error level | Dependent      | Independent   | Row |
|-------------|-------------|-------------|----------------|---------------|-----|
| coefficient | level       |             | variable       | variable      |     |
| 0.501       | 0.000       | 0.05        | nurses'        | Social        | 1   |
|             |             |             | productivity   | discipline    |     |
| 0.314       | 0.000       | 0.05        | nurses'        | Work          | 2   |
|             |             |             | productivity   | consciousness |     |
| 0.210       | 0.000       | 0.05        | Organizational | Social        | 3   |
|             |             |             | commitment     | discipline    |     |



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| 0.329 | 0.000 | 0.05 | Organizational | Work           | 4 |
|-------|-------|------|----------------|----------------|---|
|       |       |      | commitment     | consciousness  |   |
| 0.468 | 0.000 | 0.05 | nurses'        | Organizational | 5 |
|       |       |      | productivity   | commitment     |   |

As the above table output shows, Criteria of decision- making (Sig) is < 0.05. So, these correlation coefficients are meaningful.

#### Factor analysis results:

At first, it is necessary to test all of the observation variables separately in order to determine whether measurement indices (observation variables) are acceptable to measure hidden variables or not after gathering information. Therefore, total fit indices of measuring patterns (confirmatory factor analysis) were evaluated. Fit indices test of confirmatory factor analysis models suggests that measurement indicators (obvious variables) can measure the hidden variables well.

(Table4: Results of confirmatory factor analysis along with P- partial indicator of each question)

| P**   | Factor | obvious  | hidden         | P     | Factor | obvious  | hidden        |
|-------|--------|----------|----------------|-------|--------|----------|---------------|
|       | load   | variable | variable       |       | load   | variable | variable      |
| 0.000 | 0.596  | Q8       | Social         | 0.000 | 0.403  | Q1       | nurses'       |
| 0.000 | 0.686  | Q9       | discipline     |       |        |          | productivity  |
| 0.000 | 0.562  | Q10      |                |       |        |          |               |
| 0.000 | 0.663  | Q11      |                | 0.000 | 0.607  | Q2       |               |
| 0.000 | 0.654  | Q12      |                |       |        |          |               |
| 0.000 | 0.479  | Q13      |                | 0.000 | 0.819  | Q3       |               |
| 0.007 | 0.122  | Q14      |                |       |        |          |               |
| 0.012 | 0.228  | Q15      |                | 0.000 | 0.823  | Q4       |               |
| 0.000 | 0.475  | Q16      |                | 0.000 | 0.747  | Q5       |               |
| 0.005 | 0.343  | Q17      |                |       |        |          |               |
| 0.000 | 0.619  | Q18      | Organizational | 0.000 | 0.512  | Q6       | Work          |
| 0.000 | 0.736  | Q19      | commitment     | 0.000 | 0.713  | Q7       | consciousness |



### Effect of social discipline and work consciousness on nurses' productivity by considering mediating role of organizational commitment in public

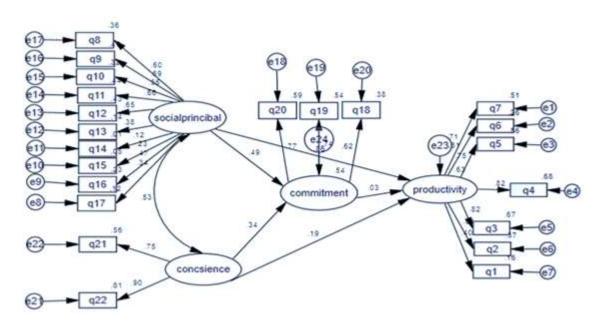
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| 0.000 | 0.771 | Q20 | 0.000 | 0.747 | Q21 |
|-------|-------|-----|-------|-------|-----|
|       |       |     | 0.000 | 0.902 | Q22 |

Results of the confirmatory factor analysis were investigated in terms of acceptable factor load of each variable along with P- partial indicator (Table7). Factor loads of all of the items were <0.05 except the items (Q14, Q15, Q17) along with P- partial indicator. Therefore, we can conclude that all of the questions except the so-called three terms are measured well by the observation variables. These three items are deleted in order to increase the research validity. Two critical partial indicators of CR and P were used for significance test of hypotheses in the present study. The critical value should be >1.96 based on the significant level of 0.05. The parameter value less than this value is not important in this sample. p <0.05 shows that there is a significant difference between the calculated values of the regression weights and zero value at 0.95. Structural equations and software of Amos22 are used for testing the research hypothesizes and the software outputs are shown in chart (1).

(Chart1: Standard model regression coefficients)



Software of Amos22 is used for the above model fit. Their general indices are shown in table 5.

(Table5: Results of conceptual model fit test)



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| RMSE  | IFI   | RFI   | CFI   | NFI   | GFI   | P     | CIMN/ |
|-------|-------|-------|-------|-------|-------|-------|-------|
|       |       |       |       |       |       |       | DF    |
| 0.061 | 0.921 | 0.902 | 0.905 | 0.911 | 0.903 | 0.000 | 2.786 |

When we explain the values of the fitting indices of the above table, it should be noted that if the value of CIMN / DF index is 1-3, the model is approved highly. There are three other indices such as NFI, IFI, CFI which always have a number between zero and one. If this number is closer to 1, the data model is more fitted. RMSEA is also another model fit index whose appropriate value is < 0.1. As it is shown in table4; the research conceptual model has a desired condition from the fit indices perspective. The research hypothesizes are studies by considering the model analysis results. It results are shown in table 6.

(Table6: Results of hypothesizes testing)

| Result    | P**   | Critical value | Regression coefficient | Hypothesizes   |
|-----------|-------|----------------|------------------------|--|
| Confirmed | 0.000 | 5.419          | 0.777                  | Social discipline affects nurses' productivity       |
| Confirmed | 0.000 | 4.410          | 0.492                  | Social discipline affects organizational commitment  |
| Confirmed | 0.000 | 5.245          | 0.119                  | Work consciousness affects nurses' productivity      |
| Confirmed | 0.000 | 5.019          | 0.340                  | Work consciousness affects organizational commitment |



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| Confirmed | 0.000 | 6.596 | 0.032 | Organizational  |
|-----------|-------|-------|-------|-----------------|
|           |       |       |       | commitment      |
|           |       |       |       | affects nurses' |
|           |       |       |       | productivity    |

Hypothesis test \*

Significant level P < 0.05 \*\*

It can be seen based on Table 6 and test of main research hypothesizes that the main research hypothesizes were studied at confidence level of 95%. It must be said that the main research hypothesizes were studied at confidence level of 95% according to CR value which is >1.96 and P- value which is <0.05 of the error level while explaining the main research hypothesizes test. Therefore, it can be said that social discipline with the regression coefficient (0.777) and CR value (5.419) at confidence level of 95% has a positive and significant effect on nurses' productivity. Social discipline with the regression coefficient (0.492) and CR value (4.410) at confidence level of 95% has a positive and significant effect on organizational commitment. Work consciousness with the regression coefficient (0.119) and CR value (5.245) at confidence level of 95% has a positive and significant effect on nurses' productivity. Work consciousness with the regression coefficient (0.340) and CR value (5.019) at confidence level of 95% has a positive and significant effect on organizational commitment. Organizational commitment with the regression coefficient (0.032) and CR value (6.596) at confidence level of 95% has a positive and significant effect on nurses' productivity.

#### Discussion and conclusion:

One of the most important priorities of managers is improving productivity and delivering better services in order to increase the individuals' satisfaction. Managers can achieve high organizational goals and progress by increasing the organizational productivity. The most important factor of improving organizational productivity is human resources. Manpower is the main capital of modern organizations. Employees play an effective role in achieving organizational goals and improving the organizational performance increasingly. It is impossible to achieve organizational goals without having efficient people. Successful organizations experience suggests that manpower should be at the center of the main goals and they should not be seen as instrument. Nowadays, paying too much attention to organizational human resources and trying to create a valuable context such as " our employees are our most



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valuable assets ", are considered as a necessity of organizational survival. The main aim of this research is studying Effect of social discipline and work consciousness on nurses' productivity by considering mediating role of organizational commitment. The results of this research show that all of the research hypothesizes are confirmed at the confidence level of 95%. The results of this research are in agreement with researches of Sadeghi (2016), Sohrabi and Keshavarz (2016), Eslami and Beik (2015), Hemmati et al (2014), Karimi et al (2012), etc. since one of the hidden but influential factors of the relationship between social discipline, work consciousness and organizational employee's productivity is organizational commitment, paying attention to organizational commitment is very important in both of the public sector and the private sector according to the findings. Understanding the contents of staff commitment can help managers improving the nursing. On the other hand, nowadays, the complete transformed and governed conditions of organizations make the commitments as an important factor in developing and producing goods and services, international trade, creating national wealth, political stability and sustainable human developments. In the other word, Organizations follow the individuals' commitment. It is obvious that all of the beneficiaries' satisfaction leads to productivity and profitability and in turn, organizational economic growth. On the other hand, organizational commitment is an important variable in understanding employees 'behavior which increases productivity, improves service delivery and improves their quality by affecting on employees' performance. Researchers consider organizational commitment as an important variable in understanding employee behavior. Therefore, organizational commitment has potential and serious effects on organizational performance, so ignoring it has harmful effects on organization and it is costly. Organizational commitment is a mode that guides employees toward achieving organizational goals and it includes employee's cognition, conflict and loyalty.

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