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Association of selective attention with procrastination and arousal among intensive care units (ICUs) and coronary care units (CCUs) nursing staff

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ABSTRACT

Selective attention selects some of concepts or information, and condones others simultaneously information. The selected information used for consciousness and to perform successfully the duties. So focus on the practice lead to assigned tasks be done better and increase quality of work. The aim of this study was to investigate the relationship between resilience and emotional intelligence of professional ward nurses. One hundred and sixty two nursing staff were selected by accessible method in intensive care units (ICUs) and coronary care units (CCUs) at the Tehran Heart Center in the year 2012 and invited to answer the d2 test. Pearson's correlation coefficient test showed a significant inverse relation between the scores of procrastination and selective attention in staffs ($r = -0.225$, $p = 0.004$). Also, a significant relationship was revealed between procrastination and arousal of nurses ($r = 0.460$, $p = 0.001$). Promoting selective attention of nurses lead to reduce procrastination, and increase self-satisfaction, improve service quality and increase the efficiency of the organization.

Key words: Selective attention, procrastination, arousal, nursing

INTRODUCTION

The main goal of any organization is achieving the highest possible level of productivity or efficiency productivity, innovation, and effective. Effective factors on productivity include capital, equipment, work methods and human resources (manpower). Undoubtedly skilled human resources are one of the most important tools to achieve organization goals. Human resources have an important role in increasing and reducing organization productivity [1]. However, if the organization has the most money and the best technology, but lacks producer and motivated human resources, it will not reach its goal. Some issues such as stress, tensions, time and psychological problems, in workplace must be managed in a way that is less harmful to staff until they can focus on their job and do it in the best way.

But how can human manage issues and solve problems? Mankind has a highly flexible ability to classify information of their environment in a regular form, this property is because of the attention function, which it allows us to focus on the important perceptual information [2]. Selective attention refers to avoidance of interference of irrelevant information with target information of a task, whether this irrelevant information acts as a dominant response or non-dominant response [3]. Kiyonaga and Egner (2013) argued that working memory and attention should not be considered as separate systems or concepts, but they are competing with each other and have an influence on one another, because both of them rely on the same limited resource [4]. In fact we receive much information from environment by our sensation, but just focus on necessary information that we need at that moment and keep them in our working memory. Specific attention (selective attention) to the environmental information is necessary for compatibility in environment, and control of life and job. It should be expressed that the nursing profession is considered as a stressful job that requires extreme focus and attention. There are different

occupational groups in hospital that nurses should be interacting with them. Moreover, nursing process needs continuous attention, care, interaction with patients and their dependents that are often in crisis. So a skilled and conscientious nurse should use the received environmental information, solving problem and thoroughly perform his/her duty. The most important way to deal with problems and crisis is collecting information and analysis that data correctly; and it is impossible without attention and focus on the work and environment. Moreover, it should be noted that some people in workplace, get fatigue sooner, reduce their attention and postpone in their duty because of job difficulty.

Procrastination is to describe a situation where something has to be unnecessary is postponed unreasonable; and finally mankind trend to complete the delayed task when he/she feels sad excitedly [5]. Burka and Yuen stated that those who have seriously procrastination tend to show their personality flaws as laziness, undisciplined, or not knowing how to organize time (Citing in Senecal, Koestner and Vallerand, 1995); Therefore it can be said that procrastination is a way to expressing inner controversies and preserving self-esteem against susceptibility [5]. Steel (2007) suggested procrastination is growing particularly in the workplace on the contrary of expectation [6]. It should be noted that the procrastination is a hidden component. Most of the researches also in attention are about attention deficit hyperactivity disorder (ADHD) and mostly in children. Thus necessity of such this research is clearly obvious. This study is based on the assumption that the rate of selective attention influence on arousal and procrastination. It means that mankind with the higher levels of selective attention avoid from errors so they have a lower of procrastination.

MATERIALS AND METHODS

Study population:

In a cross-sectional study, 162 nursing staffs were selected by accessible method based on the personnel list in intensive care units (ICUs) and coronary care units (CCUs) at the Tehran Heart Center in the year 2012.

Study measurements:

The d^2 Test of attention is an appropriate measure of the selective attention and mental concentration. The d^2 task involves discriminating and crossing out target symbols from non-target symbols in a timed, 20-second interval. There are 14 lines of 47 characters each for a total of 658 items. The d^2 is a timed test of selective attention. The items are composed of the letters "d" and "p" with one, two, three or four dashes arranged either individually or in pairs above and below the letter. Measures of performance include total number of items processed:

TN: Total Items Processed; Attention allocation, processing speed, amount of work completed and motivation

E%: Percentage of Errors; Inhibitory control, rule compliance, carefulness

CP: Concentration Performance; Speed and accuracy of performance

TN – E: Total Items Scanned minus Error Scores; Quantity of work completed after correction for errors

FR: Fluctuation Rate; Consistency of performance across trials

In this test, concentration performance is a measure of the total number of correct symbols crossed out correctly minus any errors of commission. Concentration performance is considered a slightly more accurate judge of attention as it compensates for various phenomena that can occur during the test, such as a participant skipping an excessive number of target stimuli. This leads to a heightened sensitivity to performance accuracy, when compared with the response inhibition score [7].

A study by Zillmer and Hong found that the test has a Cronbach's alpha of 0.96 in 18 to 37 year olds in the United States [5]. Other studies by Brickenkamp also asserted that the test had strong test-retest reliability in adults after five hours can be attributed to the interventions and not the fact that participants had previously taken the test [7].

Statistical analysis:

The data were presented as mean \pm SD for quantitative variables and number (percentage) for categorical variables. Normality of the distribution of variables was examined by the Kolmogorov-Smirnov test. Correlation between the quantitative variables was examined by the Pearson's correlation coefficient test. Multivariable linear logistic analysis was employed to determine variables which predicted nurses' selective attention. For analysis, SPSS software (version 19.0) for windows was used. A p-value of ≤ 0.05 was considered as significant.

RESULTS

The mean score of procrastination was 37.96 ± 28.09 ranged 2 to 152 and the average score of selective attention was 175.53 ± 33.73 ranged 72 to 273. To examine the hypothesis and relationship between scores of procrastination

and selective attention, Pearson's correlation coefficient test showed a significant inverse relation between the scores of procrastination and selective attention in staffs ($r = -0.225$, $p = 0.004$). Also, a significant relationship was revealed between procrastination and arousal of nurses ($r = 0.460$, $p = 0.001$).

DISCUSSION

Procrastination is discussed as one of the most serious problems of daily life and educational programs in modern societies. Studies suggest that procrastination is a devastating disaster through the history for at least three thousand years ago [6]. Procrastination is seen as different behaviors like: dream, fear and anxiety, conflict, aggression, hyperactivity, distractibility, hate doing work, ambiguity and confusion in the affairs [8]. According to the Saulsman (2006) viewpoint, procrastination is not laziness. He stated about procrastination: "making a decision for no valid reason to delay or not complete a task or goal you've committed too, and instead doing something of lesser importance, despite there being negative consequences to not following through on the original task or goal" [9].

We know that mankind has different cognitive functions such as attention and memory. Attention is initial step in the cognitive process [10]. Ackerman and Gross (2005), and also Phillips and colleagues (2007) suggested that procrastination linked to personal behavioral factors, such as lack of motivation, deficiencies in self-regulation, external locus of control, perfectionism, disorganization, and poor time management [11]. Hafner (2010) also expressed management of time cues to decrease in procrastination and an increase in one's ability [12]. Therefore to doing duties and avoid procrastination should focus and pay special attention on target activity. It is specified the differences in selective attention for growing it and conflict management are related to the neural systems (13). The performance of centralization is product of human capabilities in coordination of the two elements. These elements include arousal and control; that become appear in three behavioral indicators; A: speed or quantity (arousal) B: quality (control) C: Performance trends over time (control) [14]. Therefore, first step in this study was to determine relationship between performance of selective attention and procrastination. According to the results, there are significant reverse relationship between selective attention and procrastination. It means the nurses who utilize more selective attention, have less procrastination. Also, other researchers in their Studies have emphasized the effective role of selective attention on mankind's functions, behavior and sensation. Lackner and collages (2013) were looking for an answer to this question whether selective attention is associated with executive function in adolescents. Results showed that the ability the attention emancipation from confusing information in the early stages of stimulus processing skills is associated with executive function in adolescents [15]. Steel (2007) in a meta-analysis has shown that there is little correlation between procrastination, neuroticism, disobeying, and followed the emotion; also aversion task, task delay, self-efficacy, irresponsible, self-control problem, distraction, lack of motivation and being impulsive are strong predictors of procrastination [6]. Galue (1990) in a study titled "investigation of procrastination behavior at work" in Tulane University was subordinate to the results: procrastination in the workplace potentially has negative impact on the performance of organizations and employees [16]. Lonergan (1998) reached this conclusion that procrastination could reduce productivity in organizations [17]. Ariely and Wertenbroch (2002) in their study showed that people by imposed significant deadlines decreases their procrastination, and increases their performance [18]. Thus, according to these studies, it can be noted that focus (selective attention) on job, duties and information in workplace led to avoid from procrastination, and help staff cope with the environment and its surroundings. The second step in this study was to examine the relationship between procrastination and arousal. Finally, we revealed a significant relationship between nurses' procrastination and arousal. The results of this study are along with previous researches. Coote (1987) also stated that procrastination in workplace had potential influence on efficiency and performance of organization [19]. So, high level of arousal leads to lower control and focus on duty. Selective attention is the ability to enhance relevant signals of information and manage distraction, and it can be also trained to be better, so we are able to train and increase the selective attention in staff. By this way, they can focus on their tasks beside their experience, knowledge of work and education, and reduce the amount of procrastination. Consequently, the staff, colleagues and service recipients will be satisfied, empathy and peace of mind. Increasing attention is also useful even in the general population that improve the quality of daily tasks.

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