

# The Relationship between Prospective and Retrospective Memory on the Job Nurses Performance

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**Abstract-** The aim of this study was to determine the relationship between prospective and retrospective memory function in job performance Ahvaz's nurses. The study population was 41 people that they have been selected causal-comparative method. Three groups of people with depression, anxiety disorders and healthy were selected for sampling. After choosing and to achieve the objectives of the study of prospective and retrospective memory questionnaire (PRMQ) was used. Using multiple regression coefficients  $MR = 0/384$  and  $p < 0/049$  indicate a correlation between retrospective and prospective memory job performances. These results show that the relationship between retrospective and prospective memory performance. In other words, retrospective memory regression coefficients is  $0/44$  that indicate beta factor may be the best predictor of job performance.

**Index Terms-** Prospective and Retrospective Memory, job Nurses performance

## I. INTRODUCTION

Why would highly skilled professionals forget to perform a simple task they have executed without difficulty thousands of times previously? Often, such oversights are regarded as evidence of carelessness or lack of skill, but a rapidly growing field of research on what is called prospective memory (PM) has begun to reveal that such failures are predominantly the result of the way task characteristics interact with normal cognitive processes. The term prospective memory (PM) refers to remembering to carry out a delayed intention at the correct time in the future (McDaniel, Einstein GO (2007). PM involves having to remember to do a pending task without any explicit request for it while immersed in other tasks of daily life (ongoing task), to interrupt those ongoing tasks and to perform the prospective task (Einstein GO, McDaniel MA (1996) .For instance, if you have formed the intention to call a friend tomorrow evening, probably you will not "think of the intention" until the appropriate time approaches. Indeed, for intermediate and long-term intentions, conscious awareness may be relevant only during the period when the intended action should be retrieved (e.g., the performance interval, see Ellis, 1996; McDaniel and Einstein, 1993) or even irrelevant if all the parameters of the intended activity are sufficiently specified and the action can be realized by automatized routine skills (Goschke & Kuhl, 1996). PM has both a retrospective and prospective component (Brandimonte, 1991). For example, remembering the content of the intention relies on retrospective memory whereas

remembering to perform the action at the appropriate time relies on a prospective component. Executive processes may be especially involved in the prospective component of PM (Burgess, 2000). Some of the earliest research on PM was conducted in naturalistic settings by asking participants to return postcards or call the experimenter on specified days (see Harris, 1984). Although this research yielded interesting results, the inability to manipulate and control retrieval contexts made it difficult to evaluate theoretical positions. In designing an experimental version of a PM task, (Einstein & McDaniel, 1990) assumed that the critical features were to busily engage participants in an ongoing task and also give them an intended action to perform at some point in the context of that task. The studies described event-based PM, would be an intention to give a message to a friend at your next meeting—in this case, the meeting with this friend would be the specific event. Far fewer studies have examined time-based PM, whereby an individual intends to perform an action at a specific time or after some amount of time has passed—for example, to take cookies out of the oven (d'Ydewalle, Luwel, & Brunfaut, 1999; Glicksohn & Myslobodsky, 2006). McDaniel and Einstein (2000) have suggested that strategic, effortful processes are more likely to occur under conditions where there is: higher perceived task importance, a weaker association between the triggering cue and the action, and a more engaging, attention-demanding ongoing task. nurse's work environment places heavy demands on both time-based and event-based PM. Examples of such PM tasks include: remembering to communicate information to other staff members, giving medications at specific times, checking for new orders, attending meetings, bringing patients items they request, monitoring continuously changing information, and resuming interrupted tasks (Grundgeiger, Sanderson, MacDougall, & Venkatesh, 2009; Fink, Pak, Bass, & Johnston, 2010). Reported rates of nursing interruptions vary from 6.3 interruptions per hour to 8 interruptions per shift (Tucker & Spear, 2006, Biron, Lavoie-Tremblay, & Loiselle, 2009). Inherent in an interruption is that the interrupted task is postponed until it can be resumed at a later time, thus forcing the individual to create a PM intention. Studies have shown that interruptions can negatively affect PM performance (e.g., McDaniel, Einstein, Graham, & Rall, 2004; Finstand, Bink, McDaniel, & Einstein, 2006). Real-world nursing environments entail higher prospective loads, over longer periods of time, with more varied and complex ongoing and PM tasks, and with triggering events that vary from subtle to conspicuous. Furthermore, research has shown that factors such as importance of PM task and rehearsal can affect PM performance (Kliegel, et al, 2001; Kvavilashvili & Fisher, 2007). In this review, I will

focus on PM in workplace situations in fields such as aviation and medicine and in everyday tasks such as taking medications. Little PM research has addressed these situations (For full reviews, see Dismukes, 2010; Kliegel, McDaniel, & Einstein, 2008; McDaniel & Einstein, 2007.) Occupational stress consists physical and emotional impacts on workers and decreased efficacy is its consequence. Nursery as a main axis of the health care system involves an occupational stress needs to cover by a management system. Recent studies focused on this aim. Considering the importance of nursing jobs that are directly related to public health. Because the components and capabilities of nurses, including prospective and retrospective memory they affect the performance of their job as a result of the need to consider these factors can improve the performance of nurses to be effective. The general answer to the question of whether the prospective and retrospective memory with their professional performance there?

## II. SAMPLING METHODS AND SAMPLE SIZE

From early January to early February 2012, totally 21 people were selected from the target population. 7 people coping training group, 7 patients in the active treatment group and 7 patients in the treatment of anxiety disorders (including obsessive-compulsive disorder, post-traumatic stress disorder, generalized stress disorder) (7 women and 7 men) and were selected 14 healthy individuals. Both depression and anxiety have a diploma or degree that were identified the health clinic located in urban areas, including 14 students in healthy subjects less than 35 years at the University in the second semester of different disciplines are studying. At the time of the study, had not seen history of drug abuse, depression and other physical and cognitive impairments affecting their memory.

## III. METHOD OF RESEARCH

The population of this study was causal-comparative method, as mentioned before, three groups of patients were selected for sampling with depression, anxiety disorders and healthy controls (n = 14 per group). After selecting the participants into three groups and the consent has been given in the study and in a meeting with research tools (questionnaires option memory 16 prospective, retrospective) were evaluated. It should be noted that prior to implementation to ensure that the subjects of the questionnaire by the psychologist diagnosis of depression and anxiety disorders have been well chosen and comorbidity with other mental disorders do not have a structured clinical interview (SCID) on the run was.

## IV. RESEARCH TOOLS

Prospective and retrospective memory questionnaire

The instrument used to measure the Retrospective - Prospective memory (PRMQ) was by Crawford et al in (2003). The Prospective and Retrospective Memory Questionnaire

(PRMQ) was used to examine the subjective measures of PM. The PRMQ is a 16-item questionnaire. Each participant was asked to rate the frequency of occurrence of each type of memory failure in their daily life on a 5-point scale. Confirmatory factor analysis indicated that The questionnaire included 16 items (8 items for measuring prospective memory performance and for measuring performance 8 items retrospective memory) that participants will be asked on one of five possible responses under each question is located, with sign Imprint determine. The question: "Would you have been do something that you decide to do in the next few minutes forgotten, even if the front of your eye, such as pills or turn off the samovar (kettle)", answers: always ( score = 5), most of the time (score = 4), sometimes (score = 3), rarely (score = 2), never (score = 1) takes place. 1,3,5,7,10,12,14,16 questions are prospective memory is used for measurement. 2,4,6,8,9,11,13,15 questions are also being used to measure retrospective memory. John M. It should be noted that you can send in an article on page 103 of the crescent and the other subscales of this questionnaire, the questions (except for prospective and retrospective memory), including short-term memory and long term memory and a sign and has also identified the environment are symptoms Please note. PRMQ a self-report questionnaire that measured in addition to the retrospective and prospective memory could be short-term memory and long term memory and peripheral signs and symptoms as measured their memory .thus, although the main purpose of this self-report scale was Measurement of PM and AM, but each item can be classified into three dimensions. For example, item 14 (if a friend, or one of his relatives call and is not available, reconnect to forget?) To measure the prospective memory, long-term and classified evidence. In the present study we only focused on three groups prospective and retrospective memory to memory performance . Crawford et al. (2003), the validity of the overall scale, retrospective and prospective, respectively, 0/89, 0/84 and 0/80 respectively, which indicates the high reliability of the questionnaire.

## V. DATA ANALYSIS

For the classification and presentation of statistical data were used the mean, standard deviation, and percentages. Multivariate analysis of variance was used to test research hypotheses. For the study were used Kolmogorov-Smirnov normal distribution of the dependent variables. All assumptions and error variances and covariance matrices  $\alpha = 0/05$  test. Hypothesis consistency respectively were examined using tests of Leuven and box.

### Hypothesis Results

First hypothesis: there is a significant relationship between retrospective and prospective memory and job performance of nurses in Ahvaz.

**Table 1: Multivariate correlation between retrospective and prospective memory and job performance of nurses in Ahvaz showed with regression.**

regression coefficients	significance level	the value of f	coefficient of determination	Multivariate coefficient	predictors Variables	criterion variable
B=0/40 t= 2/05 0/029 P=	0/049 P=	F= 3/28	0/147	0/384 R=	prospective	Job performance
B=0/44 t =-2/55 p=0/015					retrospective	

As shown in Table (1) can be seen, regression analysis Login (inter) shows multiple correlation between retrospective and prospective memory performance means increased job retrospective memory score increased job performance of nurses in Ahvaz.

MR = 0/384 and p < 0/049 that in p < . / 05 the. These results show that the relationship between retrospective and prospective memory performance. At the same time, the probability of

regression coefficients indicate that retrospective memory may be the best predictor of job performance 0/44 beta coefficient hospital in the city of Ahvaz.

There is a significant relationship between prospective memory and job

Performance of nurses in Ahvaz hospitals

**Table 2: Relationship between prospective memory and job performance Nurses Ahvaz to Pearson simple correlation coefficient shows.**

Job performance nurses in Ahvaz Hospital		variables
significance level	correlation coefficient	prospective memory
0/035	0/35	

As shown in Table (2): there is a correlation between prospective memory and job performance Nurses martyrs of the city Ahvaz r =0/35 and p =0/035 at level p < . / 05 isn't significant. These results show that there is a significant relationship between prospective memories and, job performance

hospital in Ahvaz. The increase in prospective memory score increased job performance mobile hospital in Ahvaz.

The third hypothesis: the retrospective memory and there is a significant relationship, job performance hospital in Ahvaz.

**Table 5: Relationship between prospective memory and job performance Nurses Ahvaz shows with Pearson simple correlation coefficient.**

Job performance nurses in Ahvaz Hospital		variable
significance level	correlation coefficient	Retrospective memory
0/025	0/36	

As Table 3: showed, the correlation between retrospective memory and occupational functioning hospital in Ahvaz city r =0/36 and p = 0/025 at the level of p < . / 05 is significant. These results show that there is a significant relationship between the retrospective memory and occupational functioning. As retrospective memory scores increased job performance mobile hospital in Ahvaz increased too.

## VI. CONVERSATION

The aim of this study was to verify The Relationship between prospective and retrospective memory on the job performance Nurses. In general, we found that there is a significant relationship between prospective and retrospective memory and job Performance of nurses. According results, all

hypothesis in this study are significant, thus the result of this hypothesis is consistent with ((Scullin, et al, 2010, Gawande, 2010). Grundgeiger, (2010), manipulated the presence or absence of reminders for different prospective memory (PM)tasks, expecting increased PM performance with reminders. In addition, they observed when and how nurses used artifacts and investigated how these artifacts effected remembering of intentions. Twenty-four nurses participated in a 40 minute scenario of a morning shift start which involved eight PM tasks. The use of a simulator and a scripted scenario enabled them to control the initial exposure to the PM tasks but allowed nurses to make discretionary use of artifacts. Scenarios were AV-recorded with room cameras and a mobile eye-tracker and followed up by a semi-structured interview. Results show that: (1) only reminders that had the specific function of reminding increased

performance; (2) nurses changed the cognitive demands of PM tasks by using artifacts such as written notes; and (3) reminders can change interruption management behavior and retrieval processes of PM tasks. The results give detailed insights in the use and effect of reminders. Grundgeiger, (2010) used a full-scale simulation environment to investigate whether providing visual cues for nursing tasks increases the probability that nurses will execute those tasks. They conclude that using an embedded ICU simulator, they achieved a highly realistic and representative scenario to study PM in nursing. For a subset of the events, results show indicate that visual reminders help nurses remember future intentions. Bigdeli (2014), showed that in all of the memory types, the group with dominant positive symptoms was superior to the group with dominant negative symptoms. In addition, the results showed that in all of the memory types, the control group had superiority to the schizophrenic group. The most considerable differences between groups were in time-based PM tasks, irregular event-based virtual week tasks, and retrospective tasks (PRMQ). Enrique et al (2013), compare the performance of older and younger adults in prospective memory tasks. Our aim is to understand the differences between the performances of cognitively unimpaired older individuals and young people in prospective memory tasks using both events based and time based tasks, as well as to determine whether the prospective memory interference effect in the ongoing task differs according to the age samples. A further objective is to analyze whether the difficulty of the PM task (event-based versus time-based) affects the degree of interference in the ongoing task. Using four different event based prospective memory tasks, we found no differences between the young people and the cognitively unimpaired older individuals (even when increasing the difficulty of the ongoing task), neither in the time-based tasks or the PM interference effect. It was concluded that deterioration in performance on tasks involving the recall of pending intentions is not a problem associated with age but rather with another series of deficits in the cognitive processes. Fink (2010), suggest that event-based PM tasks are harder to remember to perform than time-based PM tasks. Unfortunately, an examination of existing memory aids (Fink & Pak, 2010) revealed that most aids to date are time-based in nature. A nurse's work environment places heavy demands on both time-based and event-based PM. Examples of such PM tasks include: remembering to communicate information to other staff members, giving medications at specific times, checking for new orders, attending meetings, bringing patients items they request, monitoring continuously changing information, and resuming interrupted tasks (Grundgeiger, et al, 2009; Fink, et al, 2010). Walders (2012) studied interruptions on prospective memory in the emergency department Memory events were a significant proportion of interruptions (47%). Direct reminders comprised the largest majority, followed by memory lapses, indirect reminders and combination memory events. Both prior to and following their shifts, physicians overestimated both the harmfulness of interruptions to themselves and the helpfulness of interruptions to the interrupter. Physicians perceived the majority of interruptions they experienced as justified As noted above the nurses have many kinds of work to do thus this is very important to help them to improve their ability of PM tasks.

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