

Research Article

Effects of Educational Psychology on Learning of Industrial Psychology in Occupational Health Students

Seyedeh Negar Assadi

Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

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Abstract:Background: Industrial psychology is an important course for occupational health students. If this course is taught with educational psychology as a new educational methods they will be more beneficial. The objective of this study was the determination the effects of educational psychology on learning of industrial psychology. **Methods:** This study was a semi experimental study which was conducted by using the curriculum of ministry of health, this course was taught with educational psychology method for students, pre and post class tests were done then results of exams were analyzed by SPSS 16, pair t- test with $P < 0.05$. **Results:** The total grade of industrial psychology was 16.60 ± 1.73 (Min: 11 and Max: 20) in the post test and was 1.01 ± 0.04 (Min: 0 and Max: 1.3) in pre test had significant differences ($P < 0.001$). All of the basic and specific lessons were significant with $P < 0.001$. **Conclusion:** According to the total results, the educational psychology was more effective for learning of basic and specific lessons in industrial psychology.

Keywords: Educational psychology, Industrial psychology, Basic lesson, Specific lesson.

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INTRODUCTION:

The use of educational psychology had benefits in teaching and learning. In many fields it was examined but in medical education specially health fields it was ignored sometimes (Apa, 2015, wiki, 2015).

According to the texts educational psychology was one of the basic science in different sciences education and could help the students and teacher in better learning and teaching (Ellaway R.H.2014, Chiang H.S.2014). In this science was emphasized on goal and priority setting for better teaching and learning and the emotional factors that could affect on learning, also strange of decision making (wiki, 2015, Karimian Z. *et al.*, 2014).

Educational psychology is an important item in decision making and strength of it in medical sciences students because they work in a special situation in the society.

If lessons of courses are presented with lecture and general tools for example power point or write board the educational psychology will be less applicable for learning and we cannot expect for analysis of practical items from students.

Researches demonstrated that promotion of educational psychology, in educational centers such as schools, universities and teachers' or professors' knowledge, was necessary for promoting of analysis and decision making in students that they will be graduated and work in the future. Presenting of lessons in appropriate features from basic and specific items can help the students for increasing the strength of analysis and decision making (Karimian Z. *et al.*, 2014, Mizerek E.2014).

McGregor CA and coworkers showed the preparing medical students for clinical decision making, how students make decisions and the perceived impact of a clinical decision making teaching intervention (McGregor C.A. *et al.*, 2012).

Chen Y and coworkers demonstrated the age differences in adaptive decision making (Chen Y. *et al.*, 2014). Gross CP and coworkers determined that decision-making can affect the cancer screening (Gross C.P. *et al.* 2014).

Epstein D and coworkers showed the satisfaction with care and decision making among

parents/caregivers in the pediatric intensive care unit (Epstein D. *et al.*, 2014).

Mecca JT and coworkers studied about the influence of compensatory strategies on ethical decision making (Mecca J.T.*et al.*, 2014). Nota I and coworkers showed the Patients' considerations in the decision-making process of initiating therapy (Nota I. *et al.*, 2014).

McGuinness KM determined the institutional decision making for empowering of health system and economic transformation (McGuinness K.M. 2014). Tariman JD and coworkers showed the contextual factors were influential in the treatment decision making (Tariman J.D. *et al.*, 2014).

In this study, the author tries to find the effectiveness of educational psychology on learning of industrial psychology.

The objective is the determination the effectiveness of educational psychology on learning of industrial psychology in occupational health students.

METHODS

This study was done as an experimental study from on occupational health students. Course plan was written according to curriculum of the ministry of the health website.

Industrial psychology has basic and specific lessons: in basic lessons were : importance of course, intelligence quotient, task or duty stress, change stress, active and passive character , dependency of child, diagnosis, co morbidity, burn out, chronic fatigue syndrome.

In specific lessons were fitness for bipolar, phobia in work, fitness for driving, fitness for psychosis, return to work, fitness for work, behavioral analysis, psychosis and work, addiction and work,

impairment. Each session, at first, they had a test and after the lesson they had a post test.

Examinations of the group were at the same level at the end of term, these tests were prepared by professors' and teachers' opinions for making sure about the correction and validity and there had been a pilot study with correlation of 0.85 for assigning the reliability in a sample of occupational health students. Educational psychology worked on improvement of teaching and learning with cognitive and emotional processes. Educational psychology in cognitive process is included 6 levels: knowledge, comprehension, application, analysis, synthesis, evaluation. Decision making could be done in progression of these processes. Emotional effects of education on students were important. In this method the teacher wrote aim and objectives for each lesson and objectives were in different educational psychology levels for cognitive and emotional processes, taught according to this educational program. The tests were included the basic and specific lessons of industrial psychology according to the educational programs.

The inclusion criteria were the occupational health students in one entrance year of 2015 -2016 in the field of occupational health and exclusion criteria were studying another field or having entered university in other years. (About 55 person).

Data were gathered in SPSS 16 and analyzed for calculation of means, standard deviation, pair t -test and $P < 0.05$. In research ethics; the researcher got oral satisfaction from participants.

RESULTS:

The total grade of industrial psychology was 16.60 ± 1.73 (Min: 11 and Max: 20) in the post test and was 1.01 ± 0.04 (Min: 0 and Max: 1. 3) in pre test those had significant differences ($P < 0.001$).

Table 1: Comparison the grades between pre and post test of basic lessons.

Test Lesson	Pre test $\mu \pm SD$	Post test $\mu \pm SD$	Pair t-test	P
Importance of course	0	0.73 ± 0.25	-14.07	<0.001
Intelligence quotient	0.01 ± 0.1	0.65 ± 0.25	-13.0	<0.001
Task or duty stress	0.01 ± 0.1	0.80 ± 0.25	-16.0	<0.001
Change stress	0.01 ± 0.1	1 ± 0.01	-	<0.001
Active or passive	0.02 ± 0.1	0.96 ± 0.13	-34.67	<0.001
Dependency	0	0.50 ± 0.50	-5.0	<0.001
Diagnosis	0.02 ± 0.1	0.96 ± 0.20	-24.0	<0.001
Co morbidity	0	0.60 ± 0.50	-6.0	<0.001
Burn out	0.01 ± 0.1	0.92 ± 0.23	-19.46	<0.001
Chronic fatigue syndrome	0.01 ± 0.1	0.87 ± 0.26	-16.64	<0.001

Table 1 shows the comparison of grades in pre test and post test for basic lessons. The mean of these lessons was 7.99 ± 1.19 (Min: 5.5 and Max: 10.0) in the post test.

Table 2: Comparison the grades between pre and post test of specific lessons.

lesson	Test	Pre test $\mu \pm SD$	Post test $\mu \pm SD$	Pair t-test	P
fitness for bipolar phobia at work		0	0.96 ± 0.20	-24.0	<0.001
Fitness for driving		0.01 ± 0.1	0.64 ± 0.33	-9.43	<0.001
fitness for psychosis		0.02 ± 0.1	0.96 ± 0.20	-24.0	<0.001
Return to work		0.03 ± 0.1	0.98 ± 0.10	-49.0	<0.001
Fitness for work		0.01 ± 0.1	0.84 ± 0.37	-11.22	<0.001
Behavioral analysis		0	0.77 ± 0.16	-24.05	<0.001
Psychosis and work		0	0.44 ± 0.48	-4.53	<0.001
Addiction and work		0.01 ± 0.1	0.82 ± 0.25	-16.05	<0.001
impairment		0.02 ± 0.1	0.96 ± 0.20	-24.0	<0.001
		0.01 ± 0.1	0.84 ± 0.29	-14.16	<0.001

Table 2 shows the comparison of grades in pre test and post test for specific lessons. The mean of these lessons was 8.21 ± 1.06 (Min: 5.25 and Max: 9.5) in the post test. The difference between mean grades of basic and specific lessons was not significant ($P=0.275$).

All of the basic lessons were significant : importance of course, intelligence quotient, task or duty stress, change stress, active and passive, dependency of child, diagnosis, co morbidity, burn out, chronic fatigue syndrome were significant with $P < 0.001$.

In specific lessons: fitness for bipolar, phobia in work, fitness for driving, fitness for psychosis, return to work, fitness for work, behavioral analysis, psychosis and work, addiction and work, impairment were significant with $P < 0.001$.

DISCUSSION:

According to the results; the total grade was 16.60 ± 1.73 with educational psychology for learning of industrial psychology.

In this article the grades after the teaching were better that before that. The grades of basic lessons were more for example the mean grade for active and passive person was 0.96 ± 0.13 and for diagnosis was 0.95 ± 0.20 . But some of the items in specific lessons were lower for example the mean grade for behavioral analysis was 0.44 ± 0.48 , determination of dependency of childhood was 0.50 ± 0.50 and for co morbidity was 0.60 ± 0.50 .

McGregor CA and coworkers showed the preparing medical students for clinical decision making (McGregor C.A. et al ,2012), in the educational psychology field. In this study author try to preparing the background of corrective decision making for medical sciences students.

Van Puymbroeck H and coworkers showed the effectiveness of teaching problem solving and decision making in undergraduate medical education (Van Puymbroeck H. *et al.*, 2003). In this article the researcher tell about the ease of access educational psychology for decision making powerful. The students could be had decision making in specific lessons.

In some studies were emphasized on the new educational methods for promotion of educational level such as Mohr NM and coworkers for curriculum implemented for improves student performance (Mohr M. et al ,2014).

Avsar UZ and coworkers studied about the new educational methods too. It was in teaching, learning and practice fields (Avsar U.Z. et al ,2014). Assadi S.N. and coworkers demonstrated the effect of correct planning in education and use of new educational methods and psychology. If in this study the author used the new educational methods and integrated the basic and specific lessons together we would be see the promotion of educational psychology. This important item must be included in the curriculum, course and lesson plans.

This study had some limitations; the number of students with entrance years to university and searching on internet which was provided. Another study is recommended with more students with the same entrance year.

This study recommended that for teaching the industrial psychology with use of educational psychology that was effective specially for basic lessons.

Another study in the review form for literature review is necessary specially for new educational methods for specific lessons.

CONCLUSION:

According to the total results, the educational psychology was more effective for learning of basic and specific lessons in industrial psychology.

Conflict of interest statement:

The author declares no conflict of interest.

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