



Original Article

Investigating the Relationship between Sensory Processing and Job Satisfaction in Occupational Therapists Working in Shiraz City

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ABSTRACT

Background: job satisfaction is referred to a set of individual's positive and negative attitudes toward his/her job. Personality traits of individuals are among the factors contributing to job satisfaction. According to Dunn model, people receive information based on their self-regulatory strategies and sensory thresholds. Then behave accordingly and in response to the environment. This paper examines the relationship between sensory processing and job satisfaction especially in occupational therapist employing in Shiraz (2014).

Methods: This study is descriptive-analytic. The sample consisted of all 33 occupational therapists working in Shiraz City who work in private and public sectors, part-time and full-time of both genders. After obtaining written consent, the demographic characteristics questionnaire, adult sensory profile and Minnesota Job Satisfaction Test were obtained. The results were analyzed by SPSS 21 software as well as Spearman's and Pearson chi square tests.

Results: No statistical correlation was found between job satisfaction and all four quadrants including the first quadrant ($P=0.441$) and second ($P=0.943$) and third ($P=0.650$) and fourth ($P=0.338$). In addition, statistically, there was no relationship between job satisfaction and various variables such as participants' ages ($P=0.51$), gender ($P=0.401$), marital status ($P=0.114$), educational level ($P=0.073$), job experience ($P=0.403$), average of daily work hours ($P=0.617$) and at end the type of contract ($P=0.079$).

Conclusion: The sensory processing cannot directly determine people's satisfaction with their jobs. Job satisfaction is a complex issue that is influenced by different internal and external factors, and cannot be considered as an element for determining job satisfaction of therapists.

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Introduction

In occupational therapy, job (work) is considered as one of the individuals' occupations [1] and job satisfaction is a positive or pleasant feeling that is the outcome of job evaluation or person's experience. Job satisfaction is referred to a set of individual's positive and negative

attitudes toward his / her job which is affected by various internal and external factors such as salary and wages, communications, policies, procedures, job dimension, job order and personality traits of employees. Job satisfaction causes the productivity to be increased and the individual will be committed to the organization. The physical and mental health will be guaranteed and his morale is improved and learns new job skills quickly [2].

Thus, job satisfaction or dissatisfaction is associated with one's whole life. For this reason, the occupation and its related factors such as job satisfaction and burnout has

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special attention. However, each person tries to choose a career that in addition to his material needs satisfies their mental health [3].

Several studies have shown that people who are dissatisfied with their jobs are susceptible to various diseases. Obviously, the nature of some jobs renders the workers more vulnerable to stress, fatigue and physical and psychological pressures. Burnout that is considered disruptive factor is one of the main inevitable consequences of job stress [4].

Among the factors contributing to satisfaction or non-satisfaction are personality and job dimensions [2]. Based on personality traits, individuals respond to different species to the environment and its dimensions. Individuals' responsiveness to the environment stimuli depends on different factors such as the characteristics of the activities and strategies of self-regulation of the individual. According to the sensory processing model of Winnie Dunn that has been done by reviewing the threshold of sensory neurological and self-regulatory strategies, 4 types of responsiveness can be found including poor behavior, sensation-seeking, and sensitivity and avoidance. Low registration and sensitivity are in inactive self-regulatory classification and sensory-seeking and avoidance are in classification of active strategies in responding to environment. Responsiveness in the form of sensory-seeking and low registered behaviors happens in individuals having high sensory threshold and vice versa avoidance responses and high sensitivity happen in people with low sensory threshold.

Thus, according to Dunn model, individuals receive information in environment and behave and actually respond to environment based on sensory thresholds and self-regulatory strategies [5].

The majorities of people have proportional and balanced responses to environmental stimuli however in the case of too much or too little responses. Based on this model, these too much and too little responses in the environment can affect the individual's performances in the area of job performances including activities of daily living, work and leisure time [5].

Scores lower than normal in sensation seeking will cause experiencing less enjoyment from environmental stimuli, lack of interest in pursuing sensory stimulation, decreased sensation seeking and lack of participation in various activities in the environment. High scores in sensation seeking will cause the interest and curiosity in the environment, interest in learning and enjoying the surroundings. High scores in sensitivity and sensory avoidance can lead into symptoms of anxiety when dealing with the different environmental stimuli [6].

Occupational therapists are exposed to diverse sensory stimuli and sometimes long and stressful ones in their job environment. Among these stimuli, there are diverse sounds with different frequencies, different visual stimuli, touch and massage, movement and proprioceptive stimulation, various odors which all can be caused by occupational therapy process and out of these services in acute and chronic mental and physical health centers.

In internal and foreign studies, no investigation has been

done in relation between sensory processing patterns and job satisfaction in occupational group in normal people. But in the study Bontempo with title of investigating the pattern of sensory processing in adults with autism with high skills in the workplace, the relationship between sensory processing and their performance in the work place was studied. Half of the people with autism were working with high abilities, but few of them remain on their job for long. These people obtain high scores in sensory registration, sensory sensitivity and sensory avoidance. These people use these avoidance, replacement and preventive strategies in workplace to deal with sensory processing problems. Participants in this study have chosen their workplace based on their sensory priorities and sensory challenges. The pattern of sensory processing has a significant effect on their job selections, performances and job satisfaction. Adapting occupational environment in workplace compatible to the sensory processing situation of these individuals can increase their performances [7].

Regarding previous studies and the importance of sensory processing on daily life performances and due to lack of adequate studies about the relation of sensory processing and job, job satisfaction especially in occupational therapists, this research has focused on investigating the relation between processing of sensory information and job satisfaction in occupational therapists employed in Shiraz (2014). Due to this, the following questions have been examined in this study:

1) How is the pattern of sensory processing in Shiraz occupational therapists? 2) How is job satisfaction in occupational therapists working in Shiraz City? 3) Is there any relation between sensory processing and job satisfaction in occupational therapists working in Shiraz City?

Methods

This was an across-sectional descriptive-analytic study. According to the Occupational Therapy Association of Shiraz in 2014, about 35 occupational therapists were working in Shiraz and the rest of the members were studying outside the province. In this study, the sample was the census of entire statistical population. Referring to workplaces of therapists working in Shiraz including hospitals, private centers, dependent centers to welfare organization, dependent centers to special educations and dependent centers to university, the researcher has received written consents with general explanation about the trend of research for participating in a research study. Then the demographic questionnaires have been completed by participants. Afterwards, sensory profile test for adults and job satisfaction questionnaire has been filled by the participants.

Inclusion criteria are as follows: all occupational therapists working in the clinical settings of Shiraz City including private and public sectors, part time and full time of both genders, having written consent. Exclusion criteria were also specific psychological problems (psychiatric diagnosis), respectively.

Tools used in research include questionnaires of

individual characteristics, adult sensory profile test, and job satisfaction test of Minnesota.

Adult sensory profile test is a standard, self-response questionnaire consisting of 60 questions in which the questions have been designed in 6 parts of smell/taste processing, motion processing, visual processing, touch processing, activity level and hearing process. The response is based on the Likert scale almost never, rarely, sometimes, often or almost always. Grading of the 60 questions is in 4 sections of 15 specimens to examine four sensory processing patterns from perspective of behavior that examines the sensory – seeking patterns, low registration, sensitivity and avoidance. This test has many clinical applications and has been designed and presented by doctor Winnie Dunn based on presented scientific activities by Ms. Slagle. This test is usable for the people above 11 years old [8]. In order not to have ambiguous questions, the validity of questionnaire in Persian language from content view has been determined. The association of test and measured specifications has been approved by two of the professors. Moreover, for measuring the reliability of Persian questionnaire, Cronbach's alpha coefficient was used. 20 questionnaires were distributed among normal adults and the test was repeated after 2 weeks. After statistical analysis using SPSS software, reliability coefficient of 0.70 was achieved and due to the small sample size, it is acceptable.

Job satisfaction questionnaire of Minnesota included 20 items about and feelings of people in the current working environment. Responses rating criteria based on 5 levels of criteria (very dissatisfied, satisfied, no idea, satisfied and very satisfied) have the values of 1, 2, 3, 4, 5 respectively and the validity of questionnaire in Moosavi and Malekzadeh has been confirmed. Reliability coefficient of questionnaire in Malekzadeh has been 90% and 87% by applying Gutman and Cronbach's alpha methods. Final grading used for evaluating job satisfaction has been considered based on obtained score of 20 items and was divided into poor, medium, high satisfaction [9].

All questionnaires were graded based on test instructions and the results were analyzed based on statistical tests.

For examining the descriptive and analytical results, SPSS 21 software was used. For finding the correlation between sensory processing and job satisfaction and also correlation between age and job satisfaction among occupational therapists working in Shiraz City Spearman's rho correlation test was used. In addition, for examining the relationship between gender and job satisfaction, marital status, educational level, job experience, average experience of daily work, type of contract and job satisfaction among occupational therapists employed in Shiraz City Pearson chi-Square was used.

Results

Among 35 occupational therapists employed in Shiraz, 33 persons participated in this research. However, 4 sets of questionnaires (4 persons) were excluded due to many defects. Twenty nine sets of questionnaires (29

persons) were investigated. The results of this research were examined in two descriptive and analytical sections.

In this study 17 females (58.6%) and 10 males (34.5%) and 2 people with unspecified sex (according to questionnaires) (6.9%) participated. The age range of participants was between 23 to 50 years. The average age of participants was 31.44 ± 7.251 . High satisfaction exists in 8 people (27.6%), and average satisfaction exists in 21 persons (72.4%) and low satisfaction was found in none of participants. Thirteen subjects (44.8%) were single and 12 subjects (41.4%) married and 4 persons (13.8%) were unspecified. Eleven people (37.9%) had bachelor, 12 persons (41.4%) master and 2 persons (6.9%) were PhD students and 4 persons (13.8%) were unspecified (tables 1-4).

Table 1: Participants' job experience

Job experience	Numbers	Percent
0-5 years	12	41.4
5-10 years	3	10.3
10-15 years	6	20.7
15-20 years	0	0
More than 20 years	2	6.9
Unspecified	6	20.7

Table 2: Participants' daily average working hours

Average working hours per day	Numbers	Percent
0-5 hours	15	51.7
5-10 hours	12	41.4
10-15 hours	2	6.9

Table 3: Participants' contract type

Type of contract	Percent	Numbers
Official	10.3	3
Contractor	3.4	1
Anniversary contract	27.6	8
Other types	48.3	14
Unspecified	10.3	3

Table 4: Statistics quadrant

Quadrant/statistics	Standard deviation	Mean
Q1	6.231	28.86
Q2	5.626	47.34
Q3	5.892	32.17
Q4	8.663	34.96

In analytical section it has been clear that a statistical correlation cannot be found between job satisfaction and each four quadrant (table 5).

Moreover, a correlation cannot be found between job satisfaction and different variables including participants' age, gender, marital status, educational level, job experience, average hours of daily work, and type of contract (table 6).

Discussion

Based on the obtained results of this study it was observed that 8 subjects (27.6%) had high satisfaction

Table 5: Relationship between job satisfaction and each four quadrant

Quadrants	1	2	3	4
P values	0.441	0.943	0.650	0.338

Table 6: Correlation between job satisfaction and different variables

Different variables with job satisfaction	Age	Gender	Marital status	Educational level	Job experience	Average hours of daily work	At last the type of contract
P value	0.651	0.401	0.114	0.073	0.403	0.617	0.079

and, 21 subjects (72.4%) average satisfaction. In addition, no subjects reported low satisfaction. Regarding the mentioned research results, it has been clear that most occupational therapists working in Shiraz had average satisfaction and none of them had low satisfaction. More than half of the occupational therapists were female and most of them have job experience of lower than 5 years and more than half of them have worked an average of 5 hours a day.

Nearly half of them were non-formal contract and anniversary contract. The number of PhD students was small and the distribution of occupational therapists with bachelor and master degrees was close together. The distribution of single and married occupational therapists was the same.

Moreover, analytical study indicated that there was no significant correlation between job satisfaction and sensory processing in occupational therapists employed in Shiraz City. Moreover, significant was not found between occupational therapists' job satisfaction and other variables of age, gender, marital status, educational level, job experience, average working hours per day and type of contract. However, it seems lack of correlation between job satisfaction and other variables such as level of education and type of contract is weaker than others.

Previous studies have not investigated the relationship between the sensory processing and job satisfaction, but they mainly focused on the relationship between sensory processing and the psychological states of individuals. For example, 214 people were investigated in a study by Engel-Yeger to examine the relationship between affect and sensory processing patterns in healthy adults. The age range of these people was 18 to 50 years. Assessment tools were adult sensory profile and positive and negative affect schedule (panas). Negative affect was significantly associated with sensory sensitivity, sensory avoidance and low registration, and positive affect was related with sensory seeking. So this research suggests that by having enough information about the effects of sensory processing patterns on their daily living, people will have better performance [10]. In another study by Rieke et al. with the purpose of comparing 51 adults suffering from obsessive-compulsive and standard scores of normal individuals in adult sensory profile test, it has been found that these people have obtained higher scores than normal ones in sensory sensitivity, sensory avoiding and low registration while they have obtained lower scores in sensory seeking [11].

Considering some previous studies and this one, it

seems that conditions of sensory processing is related to individual's psychological conditions such as affects, anxiety and obsessive compulsive disorders and may not directly related to individual's job satisfaction.

As it has been presented here, it seems job satisfaction is a complex and multi-aspects issue which is affected by various internal and external factors such as payment and wages, communication, policies, procedures, job dimensions, job order and personality traits of employees [2]. According to Randolph study, internal factors such as professional development and having job rules according to personal values are more effective on Occupational therapists job satisfaction even more than payment and continuing education [12]. Bailey mentioned some important factors of leaving occupational therapists from their job which were familial factors besides having not enough knowledge of the field, loss of chance for progression, job stress and loss of enough payments [13]. Kavooosipour explained that Iranian occupational therapist declared that job dissatisfaction can be in result of low payment, not enough organizational support and unsatisfactory professional relationship with clients [14]. So it seems that attention should be also paid to external factors in every investigations related to job satisfaction especially in occupational therapists. So these items should not be easily ignored besides the sensory processing of individuals.

According to the results of this research, the lack of correlation between level of education and type of contract (as not direct internal items in comparison with sensory processing as direct internal one) with job satisfaction was not strong. This again emphasizes on the important role of external factors in occupational therapists' job satisfaction.

Limitations of this study were the lack of cooperation of all occupational therapists working in Shiraz and difficult access to them. Difficult access to them was due to that occupational therapists mainly work in private sectors with short working hours and in non-fixed schedules in Shiraz City. As a result the researcher had to refer to each clinic several times. Also as most of our participants had job experience less than 5 years (41.4%), it might affect the results of this study.

Conclusion

The sensory processing cannot directly determine people's satisfaction with their jobs. Job satisfaction is a complex issue that is influenced by different internal and external factors, and cannot be considered as an element for determining job satisfaction of therapists.

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Conflict of Interest: None declared.

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