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Construction and testing of job satisfaction of physical therapist questionnaire

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Job satisfaction affects the productivity and the happiness of people who perform the work. Measuring job satisfaction is vital in health professions. Job satisfaction of physical therapists in Egypt was never measured and there is no available tool to measure it. This study was conducted to provide Arabic physical therapists with a valid and reliable Arabic job satisfaction questionnaire for physical therapists. 280 physical therapists recruited from Public Hospitals, Insurance Hospitals, University Hospitals and National Educational Institutions. The Arabic version of physical therapists' job satisfaction questionnaire was constructed and tested through six steps. Procedures were: 1- drafting, 2- expert review, 3- first revision, 4- pilot test, 5- final revision, 6- further testing of the final version of the questionnaire (1- Face and 2- content validity were investigated. 3- Internal consistency and 4- test-retest reliability were measured) the questionnaire has both 1- face and 2- content validity. 3- The intra-class correlation (ICC) for test- retest reliability was excellent (0.91). 4- The internal consistency for the questionnaire was demonstrated using Cronbach's alpha. Cronbach alpha was excellent (0.91). The constructed Arabic physical therapists' job satisfaction questionnaire is valid and reliable outcome measurement for job satisfaction of physical therapists. It has face and content validity. It also has excellent test re-test reliability and internal consistency.

Keywords: Job satisfaction, Performance, Physical therapy, Questionnaire.

INTRODUCTION

Jobs are very important in human life and job satisfaction affects the productivity and the happiness of people who perform the work (Cam and Yildirim, 2010; Karaman and Altunoglu, 2007). People must be satisfied with their jobs to be efficient, productive, and happy. Job satisfaction has many definitions. It can be defined as the sensation of fulfilling, harmony and energy during work (Bilge et al., 2007; Gui et al., 2009; Spector, 1997). It also can be defined as the people's feelings about their jobs and the various dimensions of their jobs (Spector, 1997). Satisfaction with job leads to success and increased productivity while dissatisfaction produces negativity and indifference with work (Dericiogullari et al., 2007; Saglam, 2011;

Serinkan and Bardakci, 2009). Since we spend most of our waking hours at work or doing things related to work, our feelings towards it and our sensations and energy during work affect our quality of life (Mako et al., 2012). Achieving satisfaction at work is a key factor that affects the performance of individuals and the organization as a whole. Also, the quality of provided service is closely related to the degree of job satisfaction (Hass et al., 2000). That is why all managers, human resource professions, supervisors, the employees themselves are interested in increasing the level of job satisfaction (Huby et al., 2002). Job satisfaction is considered through two perspectives: the cognitive job satisfaction which is related to work environment, working hours, physical effort, salary etc. (Moorman, 1993). The

affective job satisfaction which inspects the emotional feelings towards the work as a whole (Thompson and Phua, 2012). Job satisfaction has been investigated for different professions (Judge et al., 2002). The satisfaction level in health care professions is lower than other professions and these professions face burn out (Piko, 2006). Physical therapists are very important in hospitals and institutions and in recent years, the job turnover or career shift was observed and increased no matter its due to financial reasons or other reasons (Ogiwara and Araki, 2006). Both generate unnecessary costs associated with decreased continuity of care for patients and training new specialists (Linn et al., 1985). The rate of migration of highly skilled professionals from developing countries was observed. Physical therapists were included among those professions. This migration could be due to economic reasons, level of job satisfaction or many other different causes (Oyeyemi, 2012). To our knowledge, most studies investigated job satisfaction are limited to nurses and physicians (Aasland et al., 2010; Williams et al., 2010). Some studies were conducted to investigate job satisfaction of physiotherapists in some countries (Al Juhani and Kishk, 2006; Eker et al., 2004; Ogiwara et al., 2006; Oyeyemi et al., 2012) but to our knowledge, there is no previous study that investigated the job satisfaction among physiotherapists in Egypt. Job satisfaction can be examined by several job satisfaction questionnaires that were used in previous studies but unfortunately none of these questionnaires is in Arabic language and either the reliability of the questionnaire was not tested (Ojoawo et al., 2013) or the reliability and validity of the questionnaire was not mentioned in the study (Eker et al., 2004; Al-Juhani and Kishk, 2006; Senduran et al., 2012; Fu et al., 2013; Ojoawo, 2013; Usman et al., 2013; Seraj et al., 2014). Nothing was known about the level of job satisfaction among Egyptian physiotherapists. To our knowledge, there is no Arabic job satisfaction questionnaire to determine the level of job satisfaction. It is important to measure the job satisfaction level and detect the factors that have an effect on it. Through this, necessary interventions can take place to increase the job satisfaction level that results in increasing the quality of performance (Eker et al., 2004). Given the importance of job satisfaction, absence of Arabic job satisfaction questionnaire may lead to misleading data about physical therapists' job satisfaction. There is a need to fill the gaps in the literature about job satisfaction of

Arabic physical therapists. Constructing and validating an Arabic job satisfaction questionnaire for Arabic physical therapists becomes a necessary. Questionnaires are used to collect the information required by the researcher to answer his research question. In order to achieve this, questionnaires should not only collect data, but collect the most accurate required data. That is why it is very important to write a questionnaire that helps respondents to express the most accurate response (Ilan, 2008). Designing a questionnaire is a complex process (Dillman et al., 2009). Many issues should be considered while designing a questionnaire. The structure of questions is important to be considered. Whether you are going to use open, closed or mixed questions. Also, the used words are critical and changing a single word may affect the response. The question order has an effect on the responses as well. That is why the construction of a questionnaire requires concentration and attention to details besides a broad knowledge (Wilson, 2013). Questionnaire should follow certain steps in their construction to be effective.

This study was conducted to enhance the existing body of knowledge of job satisfaction as it relates to physical therapy professionals, who could impact other areas such as job satisfaction, employees' job performance, turnover, and productivity. This study adds to and fills in gaps of the existing body of knowledge that addresses job satisfaction.

MATERIALS AND METHODS

The study was conducted in Egypt in the period between January 2015 and December 2017. This study was conducted to construct Arabic job satisfaction questionnaire for physical therapists and test its validity and reliability. A sample of 280 physical therapists (Al-Rubaish et al., 2011) was conveniently recruited (all physical therapists in hospital were asked to participate but some of them refused to answer the questionnaire) from Public Hospitals, Insurance Hospitals, University Hospitals, and National Educational Institutions.

Procedures for developing the job satisfaction questionnaire:

1- Drafting:

The first step in developing the questionnaire is to draft items of consideration for inclusion in the questionnaire (Domholdt, 2005). Extensive scanning of the literature was applied. Several key

words were used to ensure that the topic of job satisfaction and any related factors were covered. Some of the used key words for searching were: job satisfaction, satisfaction at work, effect of job satisfaction, factors affecting job satisfaction, happiness at work, factors affect performance, job turnover. Hundreds of articles were obtained and screened carefully for their importance. Many articles were read carefully to detect different definitions of job satisfaction and identify the factors that affect job satisfaction. Also, the different aspects of job satisfaction in different professions were detected. besides, the domain of interest which included all aspects of job satisfaction was defined by extensive scanning of the literature of existing job satisfaction measures. The aspects of job satisfaction included finances, job security, communication with other professions, co-workers, recognition and motivations, leadership/supervision, policies and facilities, work environment, the nature of work and others (Al-Rubaish et al., 2011; Eker et al., 2004). To our abilities, Extensive searching of the existed articles were carried out and resulted in a large number of articles related to job satisfaction. Those articles were carefully read to determine any factor that could be related to job satisfaction questionnaire. Besides, few physical therapists were asked to determine the factors that affect the job satisfaction from their perspective (Domholdt, 2005). They were asked to determine from their point of view what makes us satisfied with our jobs and what causes dissatisfaction during work. As recommended by Eker et al., (2004) the all gained items were collected and then refined into groups by the researchers. For example; some questions or factors where related to financial issues were all written together. Other questions, statements or factors where related to leadership or supervision, were collected together. All the gained items and factors where sorted in groups. These groups include: finances, leadership/supervision, communication with colleagues of same profession (physical therapists) at work, communication with colleagues of different profession (physicians, nurses, others), job security, appreciating physical therapists work and motivations, , policies and facilities, work environment, the nature of work and others. Each group has several questions, statements, factors and items. They were investigated carefully. The researchers formed some questions under each group to be included in the questionnaire, ensuring that no important item was left behind. Then they were collected

together and titles were removed. They were randomly arranged giving good opportunity to think about the answer of each question separately. The previous work resulted in constructing a questionnaire which is formed of 52 questions. Some of the questions were stated in proof and others were stated in negate way to gain the attention of the physical therapist throughout the whole questionnaire. This questionnaire was considered the initial version of the first Arabic job satisfaction questionnaire.

2- Expert review:

Two professors of physical therapy works at the faculty of physical therapy, Cairo University, two consultants of physical therapy who finished their PHD in physical therapy and a psychologist (assistant professor and consultant of psychology) reviewed the questionnaire to check the face and content validity. They were asked to determine if all important elements of physical therapists' job satisfaction were addressed in the questionnaire or not, if questions are understandable or not and if terms were identified satisfactorily or not. Feedback about the contents of the questionnaire was provided by the five experts (Domholdt, 2005).

3- First revision:

The researchers revised the questionnaire based on the feedback gained from the reviewers (Domholdt, 2005) and the required changes were done. These changes included changing words or the way of stating the questions to ensure clarity and understanding of all items of the questionnaire in order to obtain reliable results.

4- Pilot test:

The questionnaire was tested in the applied situation. As recommended 30 physical therapists (Beaton et al., 2000) were asked to answer the questionnaire. After that they were interviewed to tell the meaning of questions and review the questionnaire and write any comments they had about the nature and format of the items. This was done to find out any difficulties or unclear words/questions. This process checks both face and content validity (Beaton et al., 2000; Williams et al., 2010). The physical therapists found that the questionnaire was clear and included all different aspects of job satisfaction. Some of them revealed that the questionnaire was too long and some preferred that the entire questions were proof questions. Inter item correlations were calculated separately for each item using SPSS22

to identify redundant items. The results revealed that 10 questions (five proof questions and five negate questions) have interred item correlation less than 0.2. This means that those questions were irrelevant or redundant.

5- Final revision:

Rewording items, elimination items, addition of items or revision of the questionnaire format would have been indicated after the pilot study (Domholdt, 2005). After the pilot study the researchers decided to keep both positive and negate questions to gain the physical therapist's concentration throughout the whole questionnaire. The tenredundant questions were removed from the questionnaire resulting in 42 questionnaire questions instead of 52 questions.

6- Further testing of the final version of the questionnaire:

1- 250 physical therapists were asked to fill out the questionnaire (Al-Rubaish et al., 2011) to test the reliability of the questionnaire. 2- For testing test-retest reliability 30 of the physical therapists (Mousavi et al., 2007) were asked to fill the questionnaire again after a period of one to two weeks. The questionnaire in the second time (retest) had changed item order to be used for test retest reliability testing (Trouli et al., 2008).

Statistical Analysis:

The used software program was SPSS 22.

Reliability: both internal reliability and test-retest (re product ability) reliability were tested.

- To test the internal consistency reliability Cronbach alpha coefficient was calculated.
- To test test-retest reliability intra class correlation coefficient (ICC) was calculated.

RESULTS

Face and content validity: To achieve the face and content validity for the Arabic job satisfaction questionnaire of physical therapists, Two professors of physical therapy, two consultants of physical therapy and a psychologist reviewed the questionnaire to check the content validity. Besides, the questionnaire was answered by 30 physical therapists. They were interviewed to tell the meaning of questions. They reviewed the questionnaire and wrote their comments about the nature and format of the items (whether the questions are easily understood and clear or not). This process checked both face and content

validity. The researchers considered all the opinions and comments in making the final version of the questionnaire. Face and content validity were achieved. The internal consistency reliability: the internal consistency between the questions of Arabic job satisfaction questionnaire for physical therapists was examined using Cronbach's alpha. Cronbach's alpha of all questions was demonstrated in Table (1) and equals 0.91 (Cronbach's alpha based on standardized items equals 0.91).

Test retest reliability: The test-retest reliability of the Arabic job satisfaction questionnaire of physical therapists was assessed by using the ICC. The value of the ICC can range from 0 to 1, with those above 0.80 indicating excellent reliability (Aslan et al., 2008). The ICC for test-retest reliability of the constructed questionnaire was (0.91) which indicates high test retest reliability.

DISCUSSION

This work was conducted to provide the physical therapists in Egypt with a valid and reliable questionnaire that measures job satisfaction. The research is formed of two processes. First, the construction of the questionnaire since there is no Arabic job satisfaction questionnaire specialized for physical therapy profession and very few questionnaires in English which were constructed for physical therapists. Second, testing of validity and reliability of the constructed questionnaire because if the new constructed questionnaire does not have validity and reliability, it will not have any implication and effect. The construction process of the questionnaire resulted in an Arabic physical therapists' job satisfaction questionnaire. The final version of the questionnaire is formed of 42 questions that examine different aspects of job satisfaction in Arabic physical therapy field. The questionnaire is formed of 17 questions that were stated in a negate form and 25 questions were stated in a proof form. This was done to keep the physical therapist's concentration throughout the whole questionnaire's questions. Each question has five option likert-type responses (completely unsatisfied/disagree, unsatisfied/disagree, neutral, satisfied/agree, and strongly satisfied/agree) from which one should be chosen. The constructed questionnaire has face and content validity. Since its construction depended on reviewing all the available articles for the researcher that are related to job satisfaction (factors affecting, predicting factors, and others).

Table (1): cronbach' alpha.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.910	0.909	42

Also, previous job satisfaction questionnaires, surveys, or scales that were used in different studies to measure job satisfaction of different professions. The internal consistency of Arabic physical therapists' job satisfaction questionnaire was measured by Cronbach's alpha. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale (Gliem and Gliem, 2003). George and Mallery (2003) provide the following rules of thumb: " $\alpha > .9$ – Excellent, $\alpha > .8$ – Good, $\alpha > .7$ – Acceptable, $\alpha > .6$ – Questionable, $\alpha > .5$ – Poor and $\alpha < .5$ – Unacceptable". Cronbach's alpha of the developed questionnaire is 0.91 which means excellent internal consistency of the developed questionnaire's questions. This result is consistent with the only similar article in physical therapy that the researchers found to measure Cronbach's alpha for their constructed job satisfaction questionnaire. They constructed a questionnaire for job satisfaction of physical therapists in turkey and its Cronbach's alpha was 0.92. This result is also similar to internal consistency of other job satisfaction questionnaires applied in different occupations. For example, Cronbach's alpha of job satisfaction survey was 0.91 (Spector, 1985). Eight other studies has lower cronbach's alpha including nurse satisfaction survey in which cronbach's alpha was 0.84, and the job descriptive index with 0.81 score of cronbach's alpha (Saane et al., 2003). Other studies did not provide data about internal consistency of its items like job satisfaction scale (Saane et al., 2003) and Minnesota satisfaction questionnaire where split half reliability was evaluated (Traynor and Wade, 1993). The constructed Arabic job satisfaction questionnaire for physical therapists has high test-retest reliability over two weeks (ICC = 0.91). Many scales and questionnaires did not provide test-retest reliability like Minnesota satisfaction questionnaire (Traynor and Wade, 1993), job satisfaction scale (Koeske et al., 1994), and job diagnostic survey (Hackman and Oldham, 1975). The descriptive index has ICC test-retest reliability of 0.62 – 0.79 and nurse satisfaction survey has ICC = 0.75 (Saane et al., 2003), both are lower than the test-retest reliability of the constructed Arabic job satisfaction questionnaire. Job satisfaction survey has test-retest reliability (ICC = 0.71), their researchers expected higher

results if shorter duration and fewer intervening organizational changes and events were happened (Spector, 1985). According to the results of this study, the constructed Arabic physical therapists' job satisfaction questionnaire has face and content validity. It also has excellent test-retest reliability and excellent internal consistency reliability. To conclude, the constructed Arabic physical therapists' job satisfaction questionnaire is valid and reliable outcome measure to be used to measure job satisfaction of physical therapists.

Limitations of the study:

1-The questionnaire is introduced in Arabic language to avoid any language barrier and to be using the mother tongue of the country where it was constructed. This requires translation and testing validity and reliability to be used in other languages.

2-Concurrent validity was not investigated for the newly constructed questionnaire because of the absence of gold standard instruments or questionnaires that could be used to test the same construct.

Implementations:

- The constructed Arabic version of job satisfaction questionnaire can be used in any governmental organization in Arabic countries to measure the job satisfaction of physical therapists.
- It can be used to determine areas of dissatisfaction to be improved and areas of satisfaction to be promoted.
- It can be translated to different languages to measure job satisfaction of physical therapists after testing validity and reliability of the translated version.

CONCLUSION

Based on findings of this study, it was concluded that: The constructed Arabic version of physical therapists' job satisfaction questionnaire can be used as a valid and reliable outcome measure for physical therapists in Egypt.

CONFLICT OF INTEREST

The present study was performed in absence of any conflict of interest.

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AUTHOR CONTRIBUTIONS

All authors contributed equally in all parts of this study.

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REFERENCES

- Aasland OG, Rosta J, and Nylenna M. 2010. Healthcare reforms and job satisfaction among doctors in Norway. *Scand J Public Health*. 38: 253-258.
- Al Juhani A.M., and Kishk N.A. 2006. Job satisfaction among primary health care physicians and nurses in al-madinah al-munawwara. *The Journal of the Egyptian Public Health Association (JEPHAss.)*. 18(3): 165-180.
- Al-Rubaish A.M., A. Rahim S. I., Abumadani M. S., and Wosornu L. 2011. Academic job satisfaction questionnaire: Construction and validation in Saudi Arabia. *Journal of Family and Community Medicine*. 18 (1): 1-7.
- Beaton DE, Bombardier C, Guillemin F, and Ferraz MB. 2000. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*. 25 (24): 3186-3191.
- Bilge F, Akman Y, and Kelecioğlu H. 2007. Investigation of job satisfaction levels of faculty members. *Journal of Education*. 32: 32-41.
- Cam O, and Yildirim S. 2010. Attitudes of academic nurses towards job and institution. *Journal of Anatolian Nursing and Health Sciences*. 13(2): 76-80.
- Dericiogullari A, Konak S, Arslan E, and Ozturk B. 2007. Burnout levels of faculty members: a case study of Mehmet Akif Ersoy University. *Journal of Furat Health Sciences*. 2(5): 13-23.
- Domholdt E. 2005. *Rehabilitation research principles and applications*. 3rded, PA: Elsevier Inc.
- Eker L, Tuzun EH, Daskapan A, and Surenkok O. 2004. Predictors of job satisfaction among physiotherapists in Turkey. *J Occup Health*. 46: 500-505.
- Fu J., Sun W., Wang Y., Yang X., and Wang L. 2013. Improving job satisfaction of Chinese doctors: the positive effects of perceived organizational support and psychological capital. *Public Health*. 127: 946-951.
- George D., and Mallery P. (2003). *SPSS for windows step by step: a simple guide and reference*. 11.0 update (4thed), Boston: Allyn & Bacon.
- Gliem JA, and Gliem RR. 2003. Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. *Midwest research to practice conference in adult, continuing, and community education*.
- Gui L, Barriball KL, and While AE. 2009. Job satisfaction of nurse teachers: a literature review. Part measurement, levels and components. *Nurse Education Today*. 29: 469-476.
- Hackman JR, and Oldham GR. 1975. Development of the job diagnostic survey. *Journal of Applied Psychology*. 60: 159-170.
- Haas JS, Cook EF, Puopolo AL, Burstin HR, Cleary PD, and Brennan TA. 2000. Is the professional satisfaction of general internists associated with patient satisfaction? *J Gen Intern Med*. 15: 122-8.
- Huby G., Gerry M., McKinstry B., Porter M., Shaw J., and Wrate R. 2002. Morale among general practitioners: qualitative study exploring relations between partnership arrangements, personal style, and work load. *BMJ*. 325: 140.
- Ian Brace. 2008. *Questionnaire Design: how to plan, structure and write survey material for effective market research* (2nd edition). London, GBR: Kogan page, Limited.
- Judge T.A., Parker S., Colbert AE., Heller D., and Ilies R. 2002. Job satisfaction: a cross-cultural review. In Anderson N (Ed.), *Handbook of industrial, work and organizational psychology*. Organizational psychology (vol. 2, 25-52). Thousand Oaks: Sage.
- Karaman F, and Altunoglu AE. 2007. Factors affecting job satisfaction levels of faculty members of state universities. *Management and Economy*. 14(1): 109-120.
- Koeske GF, Kirk SA, Koeske RD, and Rautkis MB. 1994. Measuring the Monday blues: validation of a job satisfaction scale for the human services. *Soc Work Res*. 18: 27-35.
- Linn L.S., Brook R.H., Clark V.A., Davies A.R.,

- Fink A. and Kosecoff J. 1985. Physician and patient satisfaction as factors related to the organization of internal medicine group practices. *Medical Care*, Vol. 23, pp. 1171-8.
- Mako H.Sz., Mako N.Sz., and Deak A. (2012). Importance of job satisfaction measures in organizational health protection. *European Psychiatry*. 27(1).
- Moorman R.H. 1993. The influence of cognitive and affective based job satisfaction measures on the relationship between satisfaction and organizational citizenship behavior. *Human Relations*. 46(6): 759-776.
- Mousavi SJ, Parnianpour M, Montazeri A, Mehdian H, Kaimi A, Abedi M, Ashtiani AA, Mobini B, and Hadian MR. 2007. Translation and validation study of the Iranian versions of the neck disability index and the neck pain and disability scale. *Spine*. 32 (32): E825-E831.
- Ogiwara SH, and Araki H. 2006. Job satisfaction among physiotherapists in Ishikawa prefecture, Japan. *J. Phys. Ther. Sci*. 18 (2): 127-132.
- Ojoawo A.O., Igudia J.C., Mbada C.E., Onigbinde A.T., & Adedoyin R.A. 2013. Assessment of life satisfaction among physiotherapists from selected hospitals in south-western Nigeria. *Nigerian Journal of Medical Rehabilitation*. 16(2): 1-18.
- Oyeyemi AY, Oyeyemi AL, Maduagwu SM, Rufai AA, AND Aliyu SU. 2012. Professional satisfaction and desire to emigrate among Nigerian physiotherapists. *Physiotherapy Canada*. 64(3): 225-232.
- Piko BF. 2006. Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: a questionnaire survey. *Int J Nurs Stud*. 43: 311-318.
- Saane NV, Sluiter JK, Verbeek JH, and Frings-Dresen MHW. 2003. Reliability and validity of instruments measuring job satisfaction- a systematic review. *Occupational Medicine*. 53:191-200.
- Saglam AC. 2011. Relation between socio-demographic characteristics and burnout levels of faculty members. *Mustafa Kemal University Journal of Social Sciences Institute*. 8(15): 407-420.
- Senduran M., Unver B., Kocak F.U., & Narin S. 2012. Job satisfaction among physiotherapists living in Aegean region of Turkey: a questionnaire survey. *Fizyoterapi Rehabilitasyon*. 23(2): 100-106.
- Seraj B., Ghadimi S., Mirzaee M., Ahmadi R., Bashizadeh H., Ashofteh-Yazdi K., Saheb Jamee M., Kharazi M.J., & Jahanmehr M. 2014. Job satisfaction and its influential factors in dental academic members in Tehran, Iran. *Annals of Medical and Health Sciences Research*. 4(2): 192-197.
- Serinkan C, and Bardakci A. 2009. Job satisfaction and burnout levels of faculty members in Pamukkale University. *Journal of Social Sciences*. 21: 115-132.
- Spector PE. 1985. Measurement of human service staff satisfaction: development of the job satisfaction survey. *American Journal of Community Psychology*. 13: 693-713.
- Spector PE. 1997. *Job satisfaction application, assessment, causes and consequences*. Sage Publication, London.
- Thompson E.R., and Phua F.T.T. 2012. A brief index of affective job satisfaction group & organization management.
- Traynor M, and Wade B. 1993. The development of a measure of job satisfaction for use in monitoring the morale of community nurses in four trusts. *J Adv Nurs*. 18: 127-136.
- Trouli MN, Vernon H, Kakavelakis KN, Antonopoulou MD, Paganas AN, and Lionis CD. 2008. Translation of the neck disability index and validation of the Greek version in a sample of neck pain patients. *BMC Musculoskeletal Disorders*. 9: 106.
- Usman R., Nafees F., Farooqui S.I., and Faruq N.M. 2013. Level of satisfaction of physiotherapists with regards to their profession. *Pakistan Journal of Rehabilitation*. 2(2): 40-47.
- Williams ES, Konrad TR and Scheckler WE. 2010. Understanding physicians' intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health. *Health Care Manage Rev*. 5: 105-115.
- Wilson C. 2013. *Credible checklists and quality questionnaires: a user-centered design method*. Morgan Kaufmann Publishers.