

Short Communication

ADAPTATION OF AN OCCUPATIONAL STRESS INDEX

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Abstract: The Occupational Stress Index (OSI) was adapted into Bengali and tested on employees of a government organization in Bangladesh. The study was conducted to assess the reliability and validity of the adapted OSI. The results showed that the adapted OSI has good reliability and validity. The study also found that the adapted OSI is a reliable instrument for measuring values of the employees of our country.

Key words: Occupational stress index (OSI), reliability, test-retest method, correlation of coefficient

Occupational stresses have become predominant feature of modern life. It has far-reaching effects on employees' behaviour and adjustments as well as off the job. For that reason need for systematic study of stress in organizational setting has recently increased dramatically. A considerable portion of organization research involves the study of stress relating to job. Assessment of stress relating to job is important also for personal counselling. Considering the immense importance of assessing occupational stress, the problem of its measurement arises. But a review of the literature reveals the lack of valid and reliable instrument for measuring stress relating job. Although a number of scales measuring stress relating job may be available from other countries, they are unlikely to be appropriate in our culture since the items of these scales were developed to suit their own culture which is different from ours in many respects. Therefore, it has become essential to develop appropriate scale for measuring occupational stress in our country.

Occupation Stress Index (OSI) is a widely acceptable scale for measuring job stress. It has been used effectively by psychologists in researches. This famous scale, however, can not be properly used in our country for two reasons: First, the test is in English and second, some of the items are culturally unfamiliar to the employees of our country. The authors feel that there is a need for translating and adapting the scale to make it suitable for measuring occupational stress of our employees. It was with this end in view that the present study was designed. The aim of the present study was to translate and adapt OSI as a valid and

reliable instrument for measuring values of the employees of our country.

The English version of the OSI was originally developed by Srivastava and Singh (1984) at Banaras Hindu University, Uttar Pradesh (UP), India. The scale purports to measure the extent of stress which employees perceive from various constituents and conditions of their job. The scale may be administered to the employees of every level operating in context of industries or other non-production organizations. The scale consists of 46 items, comprising 28 'true-keyed' and 18 'false-keyed' and each of which is rated on a five-point scale. The items are related to almost all relevant components of job life which cause stress in some way or other. The account of items constituting various sub-scales along with their indices of internal consistency is shown in Table 1.

The reliability of the scale was measured through split-half (odd-even) method and the Cronbach's alpha-coefficient for the scales as a whole was found to be 0.935 and 0.90, respectively. The reliability of 12 sub-scales was also computed through split-half method, and all the sub-scales were found rightly reliable. The validity of the OSI was determined by computing coefficient of correlation (r value) between the scores of OSI and various measures of job attitudes and job behaviour. Highly significant positive correlation was found between the scores on the OSI and the scores on measures of such job related attitudinal and motivational and personality variables.

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Table 1. Occupational stressors and their indices.

| Sub-scales (occupational stressors) | Serial number of the items in the schedule | Range of rabis |
|---|---|-------------------|
| Role Overload | 1, 13, 25, 36, 44, 46 | .30-.46 |
| Role ambiguity | 2, 14*, 26, 37 | .20-.48 |
| Role Conflict | 3, 15*, 27, 38*, 45 | .36-.53 |
| Unreasonable group & Political pressures | 4, 16, 28, 39 | .21-.52 |
| Responsibility for persons | 5, 17, 29 | .30-.57 |
| Under participation | 6*, 18*, 30*, 40* | .55-.73 |
| Powerlessness | 7*, 19*, 31* | .44-.62 |
| Poor peer Relations | 8*, 20, 32*, 41* | .24-.49 |
| Intrinsic impoverishment | 9, 21*, 33*, 42 | .32-.64 |
| Low status | 10*, 22*, 34 | .48-.63 |
| Strenuous working conditions | 12, 24, 35, 43* | .40-.62 |
| Unprofitability | 11, 23 | .48-.51 |
| | * False-keyed items | |

Depending on the ‘true-keyed’ or ‘false-keyed’ nature of the items, the following two different patterns of scoring were adopted:

| Categories of response | Scores | |
|-------------------------|-----------------------|------------------------|
| | ‘True-keyed’ items | ‘False-keyed’ items |
| Never/strongly disagree | 1 | 5 |
| Seldom/disagree | 2 | 4 |
| Sometimes/undecided | 3 | 3 |
| Mostly/agree | 4 | 2 |
| Always/strongly agree | 5 | 1 |

For ascertaining the validity and reliability of the new Bengali version (Appendix 1), 70 employees of different cadres were randomly selected from two industries and two non productive organizations of Rajshahi City Corporation. In order to have a comparison of the original and adapted form of the test, 30 educated employees were selected from the same industries.

The procedure used in the study involved three steps. First, the English version of the scale was translated into Bengali and was checked and rechecked by the authors.

Second, to ascertain the appropriateness of the translation, four judges (two from the Department of English and two from the Department of Bengali, RU), were requested to examine carefully whether each item of both Bengali and English version conveys the same idea. Final form of the Bengali version was obtained by incorporating the suggestions offered by the judges. Then the Bengali version of the scale was supplied to three judges (teachers of the Psychology Department, RU) with a request to detect the items that appeared to be inappropriate for our culture. But the judges detected no such items. Third, in order to determine the test-retest reliability (Annestasy and Susana 1997) of the newly constructed Bengali version of the test, it was administered to the subjects following standard procedure on two occasions at an interval of one month. The consistency between two sets of scores was computed by product moment correlation method (Garrett 1966). Finally, the original English version and the translated Bengali version of the scale were both administered on the same subjects at an interval of one month and co-efficient of correlation between the two sets of scores were computed.

The correlation co-efficient ($r = 0.87$) computed for assessing the test-retest reliability of the adapted OSI scale was highly significant ($t = 14.88$; $P < 0.01$). Likewise the correlation co-efficient computed for testing the resemblance between the original and adapted version ($r = 0.82$; $N = 30$) was also found significant ($t = 4.36$; $P < 0.01$). Since the main purpose of the study was to adapt an English version of OSI in Bengali in order to make it suitable for our culture, the results of the present investigation reveal that the translated version is worth using for such studies in Bangladesh.

References

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Appendix 1 (tckvgj K cxob mPx wbt` Rvej x)

GB cKvgj wU gb`wEK AbmUvrb Z` msMni Rb` Zix| cKvgj wUz eiVZ Dw³ mgni gra`tg GKRB PvKixRex Zvi PvKixi wewfbekZvej x I Aemv m^ufK Zvi gZvgZ e³ Kiteb| cUZ`KwU Dw³i Rb` m^ule` cvPwU DEi t` lqv AvtQ, DEi`vZv th tKvb GKwUz wUK (V) wPy w`tq Zvi PvKixi cKwU I Aemv Ges PvKix m^ufK Zvi e³MZ AwfAZv I AbfwZ e³ Kiteb|

Table with 6 columns: Atb`iv thfvte KvR Kti`_vtKb Avgvi I tmBfvte KvR Kiv DwPZ, tgvUB GKgZ bv, GKgZ bv, wvxvS-wbZ cviwQ bv, GKgZ, m^uv GKgZ

Avcbvi DEi wbuOavq Dvj L-Kiteb| Avcbvi DEi i tMcbxqv i qv Kiv nte|

1| GB PvKixZ AvgvK cPzi KvR KitZ nq | 2| KgPvIt Avgvi KvR Ges Zvi djvdj m^ufK th mKj Z` cvlqv hvq Zv A`u÷- I AchfB| 3| Avgvi wewfbekKZP Avgvi KvR m^utK^ccvqB ci`ui wetiwa wbt`Rbv w`tq _vtKb | 4| ivR%wZK/ `jxq Pvc Ges cwZombK wbgq Kvbb I wbt`Rbv gta` mgStq mwab KitZ wltq AvgvK gvtS gvtS RvUj mgm`vq cotZ nq| 5| AtbK KgPvixi Kg^uqZv I thwM`Zvi `wqZi Avgvi Nvfo tPtc etm| 6| GLvtb Avgvi Awakusk gZvgZ`i`bv nq Ges ev`erqb Kiv nq| 7| KgPvix`i gta` Kg^uebUb m^uwKZ Avgvi wvxvS-I wbt`R h_vh_fvte AbmiY Kiv nq| 8| th me e³tK Awg cO` Kw Zvt`i mvt_ AvgvK KvR KitZ t` lqv nq| 9| Avgvi KvRwU GKtNtqwg aitbi | 10| D`Pzi KZ^uq Avgvi AvZm^uvtbi ghPv w`tq _vtKb| 11| Avgvi KvRi cwi gvb AbcvtZ Awg Kg teZb tctq_wK| 12| DtERbvKi cwi teK AvgvK KvR KitZ nq| 13| AZ`wak KvRi Pvc wbtq AchfB mL`K KgPvix I mthwM-mjeav mn AvgvK KvR Pvj vtZ nq| 14| Avgvi KvRi j`v I Dt`k` `u÷- I mpcwi Kw Z| 15| Avgvi Avl Zvxb KgRvU cwi Pvj vq D`P c` m`KgRZfv evav mw÷- Ktibv| 16| wKZivR%wZK/ `jxq Pvrci Kvty AvgvK B`Qvi wefix AtbK KvR KitZ nq| 17| wKZ mSL`K KgPvixi fvel`r Avgvi Dci wbfkxj | 18| ckwmbK/Awcm/Kvi Lvrv msvs-mgm`v mgvartbi Rb` D`P chf^uq cvqB Avgvi mthwMzV Pvl qv nq| 19| KgPvix`i cKvY KgPvix msvs-Avgvi cv`emgn h_vh_`i`Zi tctq _vtK| 20| Avgvi wKZ mnKgP I Aa`b KgPvix AvgvK e`cgvY Kivi Rb` cvqB AccPvi Pvj vq| 21| Avgvi AwfAZv I Kg^uqZv `vxbfvte ctqvMi Rb` ht_o mthwM tctq_wK| 22| GB PvKix Avgvi mgwRK ghPv evx Kti tQ| 23| Avgvi Kg^uqZv I KtWi cwi kftgi Rb` Awg K`wPr cj`KZ nB| 24| Avgvi wKZ KvR Svkcy^u RvUj | 25| AZ`wak KvRi Pvrci Rb` AvgvK ZwoNwo Kti KvR tkl KitZ nq| 26| Avgvi KZ^uq I KvRi cwi wa m^ufK A`uov Zv I AwbOqvZvi Kvty Awg mpfvte KZ^u m^uv`tb m`lg

nBbv| 27| Avgvi Dci AwcZ bZb`wqZi cvj tbi Rb` AvgvK my`u÷- wbt`Rvej x I chfB mthwM-mjeav cvvb Kiv nq bv | 28| `jxq `u` i qvt`_gvtS gvtS AvgvK wKZvbgq emf^u KvRi KitZ nq | 29| GB cwZovtbi Dvuz I mgvixi Rb` Avgvi wvU `wqZi AvtQ etj Awg gtb Kw | 30| cwZovtbi/wefvMi `i`Zcy^ubmz wbaftbi tfti Avgvi gZvgZ Pvl qv nq| 31| `i`Zcy^uct` wbtqvMi tfti Avgv`i AvMh h_vh_fvte wetePZ nq| 32| ckwmbK I Kvi Lvrv msvs-mgm`v mgvartbi tfti Avgvi mnKgfv AvgvK t`Ovq mnthwMzV cvvb Ktib| 33| Avgvi cebZv I thwM`Zvi h_vh_wKvki Rb` Awg cPzi mthwM tctq_wK| 34| Avgvi c` I KvRi cwZ Avgvi D`Pzi KZ^uq h_vh_`i`Zi`b bv| 35| Awg cvqB Abfe Kw th GB PvKix Avgvi RvbuvtK Koki Kti ZjtQ| 36| Awcm msvs-KvR AwZgvtvq e`-vKvq Avgvi msvmwi K I e³MZ mgm`v mgvartbi Rb` ht_o mgq cvb bv| 37| Avgvi KvTQ `u÷- bq th wK aitbi KvR I AvPy Avgvi DaZb KZ^uq I mnKgfv Avgvi wbu cL`vkv Kti | 38| KgPvixi Awcm wbt`R Ges AvbwbK Kg^uxiZi cUZ h_vh_`i`Zi cvvb Kti | 39| ivR%wZK I `jxq Pvrci Rb` Awg AvbwbK I ckwmbK c^upw Ges bwiZgvj v f^uz KitZ eva`nB | 40| KvRi aviv, h^uscwZ Ges kZvej x cwi eZB ev mstkvatbi tfti Avgvi gZvgZ Pvl qv nq | 41| GB cwZovtbi/wefvMi KgPvix`i gta` ht_o cvi`umi K mnthwMzV Ges `jxq HK`w`gvb | 42| th mg`-mgm`v mgvartbi e`vcvti Awg ht_o cvi`kP GgbiK tm`w mgvartbi Rb` I Avgvi mthwMzV I gZvgZ Pvl qv nq bv | 43| Avgv`i Kj`vY I mthwM mjeavi wK t`tK wetePv Kij GLvtb KvRi cwi tek mthwM RbK | 44| Atb`iv thfvte KvR Kti`_vtKb Avgvi I tmBfvte KvR Kiv DwPZ | 45| BtZvc^ucpvj Z bwiZgvj v I Kv^uev ev`erqb KitZ Awjeavi m^uvb ntv nq | 46| AZ`wak KvRi Pvc I mgtqi Afvtei Kvty Awg Avgvi mst^u tgvvteK`wqZi cvj b KitZ A`lg|