

Occupational stress indicator (osi)



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Discuss the weaknesses of the Occupational Stress Indicator. What are the alternatives?

The Occupational Stress Indicator (OSI) is one of the most frequently used measures of occupational stress. Its intention is to provide practical help to individuals and their organizations (Cooper et al., 1988). It was designed to measure the key components of the stress process and work study in a wide variety of organizations. The original occupational scale contained over 200 items scored on a 6-point Likert-type scale. The Indicator consists of one biographical questionnaire and six questionnaires each measuring different dimensions of stress. For example, source of stress, moderating factor in aspects of dealing with stress and the stressors affects on the individual and situation. The sources of pressure questionnaire have six subscales and are a measure of factors thought to have a role in the aetiology of occupational stress. There are three questionnaires for assessing moderating variables: these are for type A behaviour pattern with three subscales, locus of control with three subscales, and coping strategies with five subscales. A further three questionnaires for mental ill-health, physical ill-health, and job satisfaction (with six subscales), assess strain or 'stress effects'. In simple terms, the OSI uses questionnaire statements to assess, a) how you feel about your job b) how you assess your current state of health, c) the way you behave generally, d) how you interpret events around you e) sources of pressure in your job, and f) how you cope with the stress you experience. OSI questionnaires are based on identifying three key elements of the stress process-effects, sources, and individual differences-and the scale places appraisal at the centre of the process. In particular, it is felt that it is not the

demand or the source of pressure itself that is the issue; it is the perception of that pressure (Lazarus, 1966). It follows that the perception of individual differences such as coping and support and the perception of stress outcomes such as well-being and job satisfaction should also be measured. Pratt and Barling (1988) stated that it is as important to measure the interpretation that individuals give to an event as it is to measure the event itself. The recognition that appraisal plays a key role in the stress process makes it appropriate to use self-report questionnaires to measure stress at work. The essence behind the OSI was to provide a measurement scale, which would in turn provide a link between theoretical knowledge – in particular Lazarus (1966) Transactional Model – and empirical evidence.

Before discussing alternatives, it is important to evaluate the strengths of the instrument – and assess the positive attributes that the indicator has provided for future research. Although self-report mechanisms of discovering data have had criticism for its susceptibility towards experimenter bias – i. e. participants lying for socially desirable reasons, or over-playing/down-playing their answers for personal means, self report instruments are a valuable way of seeking responses from the core source themselves. Thus responses are first hand – and not an interpretation from a second or third party. In regards to work related stress – it has been found that self-reported health is a good indicator of the health status (Farmer & Ferraro, 1997) and there is a positive relationship between self-reported health and self-efficacy (Parkatti, Deeg, Bosscher, & Launer, 1998). Thus, this may imply that self report responses collected from a measurement like the OSI may well yield valid responses in regards to their health and how this in turn may affect how they feel about

their working environment and how they perform within it. There has been a considerable body of research that has investigated self-reported health and occupational stress. It is accepted that in work situations stress due to increased psychological demands and reduced job control is related to poor self-reported health (Andries et al., 1996). Therefore, asking employee's to complete the complex occupational stress indicator questionnaires may indicate where this stress is coming from and how the person perceives they are dealing in the situation. The major advantage of the OSI is that it is a mechanism of which may highlight a potential damaging work-related stress problem – not only high-lighting the problem, but the scale attempts to highlight its source and potential solution as well.

The OSI has been used extensively since its publication in 1988. However, up until the late 1990's, the scale has not been changed or been amended in any way. A number of studies have reviewed the design and use of the questionnaire in attempt to test the psychometric properties of the OSI, and to see if the instrument could be improved. The original OSI suffered from being developed on the basis of a very small (N = 156) sample. Therefore, it was important in any evaluation of the scale to include a vast sample to prepare the analysis from. In attempt to evaluate the scale structure and reliability, Williams (1996) analyzed the data for over 20, 000 participants working in over 100 different organizations. The data was collected between 1990 and the end of 1995 from a wide variety of organizations in the public and private sector in the United Kingdom. Accounting for errors, a sample of 4, 455 individuals in total adds support to a great body of literature that presents a consistent picture of the strengths and weaknesses of the

Occupational Stress Indicator. Through analyse, the scale appears strong at measuring job satisfaction, mental and physical health, and sources of pressure (Cooper & Bramwell, 1992; Rees & Cooper, 1992; Robertson et al., 1990). However, if the aim of the OSI questionnaires are to identify key elements of the stress process- e. g. the effects, sources, and individual differences-the indicator is somewhat flawed. The indicator is not so strong at evaluating the extend to which the individual feels in control of their situation (i. e. locus of control) or what behaviour, coping strategies people are most likely to adopt (Kirkcaldy, Cooper, Eysenck, &Brown, 1994). Thus, the scales seem to lack in the ability to address the fundamental issue of individual differences in the process of stress, and how one perceives and copes with their situation. Therefore, there is strong evidence to suggest that the scale itself needs improvement or redesign to account for this (Williams & Cooper, 1997).

To discuss alternatives or improvements for the Occupational Stress Indicator – one needs to highlight how we define stress and how this definition is relevant in the work place. Stress can be regarded as the sum of total of environmental demands that tax our mental resources. For some (e. g. Lazarus, 1975), stress only has impact if we appraise it as threatening or harmful to ourselves. Symptoms of stress are varied but often present itself as some kind of strain in psychological, physiological, behavioural or physical health. Information about the individual and stress is often accumulated through self-report questionnaires. The most common (but not necessarily the strongest method) is through the use of a cross sectional design – such as the OSI. All data collected via this method is self-report and collected from

the same people at the same time. There is danger in this approach – as it can often inflate the correlations observed between job-factors and the strain outcome, and this does not accurately indicate the direction of causality. Conclusions derived from such analysis are often in terms of ‘main effects’ (of work related factors) and modifiers (moderate, mediators – variables that serve to enhance or attenuate the effect of job stress). For example, the level of control or autonomy against level of work load put upon the individual. However, this does not clearly tell us whether these two variables are related or independent of each other. It is merely assumed that one causes the other.

As mentioned before, the flaws of the OSI seem to be in its ability (or lack of ability) to reliably identify how one perceives their situation and addresses coping strategies to suit. Lazarus (1975) account of occupational stress is useful here. He proposes a transactional cognitive view of stress. Lazarus believes that it is not just the environment that needs to be taken into account when considering sources of stress, but also a look at the person and how they ‘fit’ into the environment. Lazarus (1975) believes that there is a transaction between the environment and the person. This transaction is only stressful if a) the person believes the outcome of behaviour is relevant to personal goals/beliefs and b) if the person recons that the environmental demands exceed the personal resources of the individual. Furthermore, every encounter between the environment and the person involves appraisal and coping strategies. Lazarus (1975) believes that since perception of the stressor is all important, it is pointless to pursue objective indicators of the

environment. Rather it is this perception of the situation that indicates how stressed one will feel.

A great criticism of the OSI is in its complexity and its length. This makes the administration of the scale a timely process. In response to this, Faragher, Cooper and Cartwright (2004) propose an alternative, two-stage, risk assessment process. This involves an initial screening questionnaire for all employees of a given work place, and then conventional risk assessment tools are used to evaluate in detail just those individuals identified as having a potential stress problem. There are three main sections of the questionnaire which measure employee perceptions of their job, organizational commitment and employee health. This shorter version of the Occupation Stress Indicator is termed the ASSET – A Shortened Stress Evaluation Tool. Tests of just under 10, 000 employees in 100 public and private sector organizations within Britain found ASSET to be quick and easy to complete, generating a high response rate. Thus in comparison to the OSI, the evaluation of the ASSET provides evidence that it possesses good reliability (a small number of reliable factors which increases the ease of interpretation) and has good reports of validity. However, it could be regarded that this shortened scale may have negative consequences for its validity. For example, the ASSET is put forward as a two stage ‘ risk assessment’. This implies that the scale is administered to assess the employee’s susceptibility to feeling stressed. Therefore, this ignores that there is an interaction between the environment and the person, but instead, puts heavy emphasis on the person’s ability to cope in a given environment. Therefore, this type of risk assessment may be perceived as more of a ‘ test’

- rather than a support mechanism. Therefore, the validity of the screening scale itself is put into question – as it is highly likely that participants will want to answer in a socially acceptable manner to avoid incrimination. .

Another scale that has adopted a shorter format is the Pressure Management Indicator. Williams & Cooper, (1996) cite this model as more reliable, more comprehensive, and shorter than the OSI. The Pressure Management Indicator did infact evolved from the Occupational Stress Indicator.

Therefore, the comparisons between the two scales here, opposed to the ASSET scale, are more valid and useful. Therefore, its inventors regard it as the replacement indicator of occupational stress. Williams and Copper (1998) examined existing measures of stress (directly and indirectly related to work) – these included questionnaires on mental health (e. g., Crown & Crisp, 1979), job satisfaction (e. g., Warr, Cook, &Wall, 1979), and locus of control (e. g., Rotter, 1966) and worked from the original OSI to produce a standardized, reliable, compact, and comprehensive instrument to measure work-related stress. The PMI incorporates three main scales; stress-outcome, stressor and the moderator factor. The stress-outcome scales measure, job and organizational satisfaction, organizational security, organizational commitment, anxiety-depression, resilience, worry, physical symptoms, and exhaustion. The stressor scales cover pressure from workload, relationships, career development, managerial responsibility, personal responsibility, home demands, and daily hassles. The moderator variables measure drive, impatience, control, decision latitude, and the coping strategies of problem focus, life work balance, and social support. To overcome the limitations of the original OSI, Williams and Copper (1998) embarked on a comprehensive

analysis of the scale, ranging from analysis of the name of the scale – e. g. it was found that the mention of ‘ stress’ in the title of the original scale implied there was a ‘ stress problem’ in the organisation. Thus changing the name to ‘ Pressure’ intended to imply a more neutral term (opposed to stress – the negative consequence of pressure – William 1994).

Through the extensive analysis of the OSI Williams and Copper (1998) revealed the main attributes of the original scale that existed as its weakness – and purposed to find solutions to these problems. For example, as stated the scale could be interpreted as threatening and time consuming. Thus a shortened version was essential. Another issue highlighted with the use of such a lengthy scale – was infact the possibility that a large number of items would increase the co-efficient alpha rating – and thus making the scale appear more reliable than it actually is. Therefore, the production of the PMI was designed to revise the questionnaires and number of items, without sacrificing its psychometric properties. Furthermore, it may be felt that the items on the OSI were bias towards white-collar or executive levels – ignoring the stress felt at lower levels of the organisation. The length and complexity of the OSI may have been bias towards workers who took on reading activities regularly – opposed to the more manually skilled employee’s with more hands on day to day tasks. With this diversity in mind – it is essential that a vast number of employment scenarios are covered on any stress indicator scale. It may be interpreted that the original OSI was not so diligent in representing such diversity in the work-force. Williams and Copper (1996) were careful to use an extremely diverse data set representing over 100 different organisations from the public and private

sectors. Incorporating diversity, it is also important to eradicate cultural boundaries in the questioning material. For example, the acknowledgement and understanding that many companies want to investigate work-related stress across national and ethnic boundaries is important. Therefore, can the OSI be regarded as a multi-cultural measure of occupational stress? It may be suggested that the mere fact it was based on a very small sample of just over 150 people, that it is impossible that it has gained a representative view of the world and the people and organisations within it. Furthermore, the consideration that the world of work is always changing means that the questions on the scales need to reflect changes in demand such as job insecurity and technology. The fact that, the original OSI scale has not been amended since its production renders it out-of-date in many respects. To combat these downfalls, William and Copper (1996), attempt to combine the questionnaires with organization-specific items, in hope of identifying sources of pressure and the use of coping mechanisms. The original scale lacks the ability to provide a cross-occupational and cross-company analysis. The solution was to develop a standardized measure covering all aspects of the stress-strain relationship that is, stressors, moderating factors, and stress outcomes (William and Copper, 1996). The new PMI questionnaires are intended also to help raise awareness of occupational stress at the individual and organizational level, identify those individuals who need remedial help, and provide information for the design of appropriate interventions

In light of the discussion above, the Occupational Stress Indicator has presented many weaknesses – in particular reference to its design, practical administration, validity and reliability. Many have questioned the length and

complexity of the original self-report questionnaire. This has led to a revised version of the scales in the form of the PMI (Williams and Copper, 1996). The PMI, developed just under ten years after the original OSI, intended to combat many of its methodological concerns – such as shortening the administration process and taking into account cultural and occupational differences of its users. It would appear that through the quest to appeal to a wide audience – i. e. a diverse work base, the original OSI flawed due to its lack of ability to be able to offer a reliable source of stress indicator in reference to the individual's perception of the situation and how they perceive they are coping. Although the original OSI was giving an accurate representation of job satisfaction, mental and physical health, and the sources of pressure – i. e. concrete certainties that are easily measurable, the scale was not so reliable in measuring more abstract properties such as perceptual qualities. Therefore, it may seem a valuable option to concentrate on the perceptual properties of the scale itself to produce more reliable scale that measures how the individual feels, opposed to just how the individual acts in their environment– hence the development of the Pressure Management Indicator. This goes hand in hand with the theoretical assumptions that underpin the measurement scales – e. g. Lazarus transactional model of stress – purposing that there is a transaction between the environment and the person – which in turn may render the interaction as a stressful one or not. It is important to take into account that stress is an interactive process between the stressor and the moderator and the stress outcome. The newly revised PMI scale is more advanced than the original OSI scale in that it takes into account this interaction. An important factor highlighted by the ASSET scale is that the administration of an Occupation

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Stress Indicator or Pressure Management Indicator needs to be as impartial as possible. A large weakness that needs to be overcome about any type of stress indicator is that it is not measuring the person's ability to cope in stressful situations. For example, the scale is not intended to assess or question personality or to test the personal attributes of the individual, but instead, to provide an indication of how one perceives their working environment and how a number of variables interact to produce potentially stressful effects for the individual. The overall aim of a stress indicator scale is to identify physical and psychological areas of concern that can be highlighted to encourage an optimal balance of stress, coping strategies and support in the work place.

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