

**Stressful Life Events and Somatic Complaints in a Nigerian Adult Sample**

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*The study was a cross-sectional survey designed to determine whether the experience of stressful life events and gender would predict somatic complaints. It was thus hypothesised that somatisation would be predicted by stressful life events; and that the effect of stressful life events on somatisation would vary across gender. A total of 102 (men = 58, women = 44) non-academic staff of a Nigerian university, drawn on the basis of availability and accessibility participated in the study. They completed and returned the Stressful Life Events Inventory (Holmes & Rahe, 1967) and Enugu Somatisation Scale (Ebigbo, 1986) individually administered on them. The results of a multiple regression analysis of the data showed that stressful life events accounted for over 22 of the variance in somatisation (adjusted R<sup>2</sup> = .22; F = 2.55, p < .001). Gender and interaction effect of stressful life events and gender was negligible, thus confirming the first but not the second hypothesis. Implications of the findings were discussed.*

Somatic complaints accompany many psychiatric conditions. People with schizophrenia, depression, anxiety disorders, and substance related disorders often present with somatic complaints. The same goes for people with Axis II disorders, such as obsessive compulsive personality disorder, avoidant personality disorder, and narcissistic personality disorder, histrionic, borderline, and antisocial personality disorders. Sometimes they constitute the presenting complaints in personality disorders in the form of crawling sensations, heat in the head or other parts of the body, cramps, nausea, and hot/cold spells, in the absence of organic pathology (Mayou & Farmer, 2002).

Functional somatic complaints or somatisation, the presence of somatic symptoms without demonstrable biological cause, come under the broad name of somatoform disorders, which include somatisation, conversion, and pain disorders (American Psychiatric Association, AP A, 1994). They also include hypochondriasis and body dysmorphic disorders, and the "Not otherwise" specified category. These disorders may be transient or run a chronic course (Gelder, Harrison, & Cowen, 2006).

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A diagnosis of somatisation disorder is made following a history of multiple physical complaints that begin before age 30 years and extend over several years, resulting in social and occupational debility. Four pain symptoms in at least four different sites, two gastrointestinal symptoms, one sexual symptom, and one pseudo neurological symptom are required to meet DSM criteria for diagnosis (APA, 1994). If symptoms do not meet the criteria but have lasted for more than six (6) months duration or longer, they are said to be undifferentiated, or "Not otherwise" specified if they are of shorter duration. In the present study, somatisation was studied without recourse to the diagnostic grouping discussed earlier on.

Lifetime prevalence rates of 1-2 percent have been reported for somatisation disorder (Simon, 2000) and is said to occur more in women than in men (Martin & Yutzy, 1999). Prevalence rates for women have been reported at 0.2-2; and less than 0.2 for men has been found (APA, 1994), depending on the method of assessment and professional background of the person doing the assessment.

Some researchers see somatisation as a symbolic representation of relational problems (Ebigbo, 1986). Adherents to this Freudian/dynamic perspective place emphasis on interpreting the symbols, and possibly bringing them to the awareness of the client for healing to occur. The problem with this perspective is that it fails to explain how such symbolisms are transformed into the somatic reactions called somatisation.

Somatisation on the hand can be thought of as one of the physiological corollary of stress. Selye (1950) demonstrated the general effect of stress on the sympathetic nervous system, endocrine system and lymphatic system; and later, Walter Cannon (Cannon, 1953) showed that acute emotions, physical exertion, cold and pain could also trigger the stress response.

Lazarus introduced a cognitive dimension to stress theory by emphasizing that psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources of the person (Lazarus & Folkman, 1986, p. 63). This conceptualisation allows us to articulate the experience-somatic relationship within which we may understand somatisation.

A detailed review of the neuro-endocrinology of stress has been provided by Tsigos, Kyrou and Chrousos (2004). Acute stress activates the stress biochemical axes that enable the individual deal with the situation. These biochemical and physiological regulators may tend to malfunction with persistence of the stressor, resulting in dysfunctions of varying manifestations (Selye, 1950).

The stimulus-based model of stress, differing from the interactional and response-based models of Lazarus and Selye discussed above, conceptualises stress in terms of events external to the individual, and became popular through the work of Holmes and Rahe (1967). Holmes and Rahe thought that stressful life events or critical life stresses, major adjustment demands brought about by life circumstances, may prove stressful for the individual and impair the person's health. They developed the social readjustment scale

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to gauge the amount of critical life events to which a person has been exposed over a period of time; and to determine how stressful to an individual a particular life event has been. Stressful life events were ranked in intensity from highest to lowest life change unit (LCU): death of spouse (100 LCU) being the highest, and closely followed by divorce (73 LCU), through business readjustment (38 LCU) down to minor traffic violation (11 LCU); a relatively low amount of life change implied a low susceptibility to stress-related illness and vice-versa.

Not everyone who is exposed to high stress however, becomes ill. This may be due to the modulatory influences of other factors such as personality, gender and the social network of the individual. Moreover, Stressful life events may threaten personal integrity on account of what meaning they hold for the individual (Brown & Harris, 1978), and thus lead to diseases of adaptation (Selye, 1985) including somatisation.

A review of the literature reveals that psychological disorders may be found in as much as 30 percent of family relatives of persons with somatisation disorders, mostly pain disorders for female relatives and alcoholism for male relatives (Chaturvedi, 1987). Pain disorders have been noted to run particularly among female relatives in a family (Guze, 1993). The reason for this is not readily known, just as it is not yet clear whether heredity plays any part in somatisation disorder. Observed family patterns may be accounted for by parents' modelling tendencies to somatise distress to their children (Noelen-Hoeksema, 1998). Besides, dysfunctional family patterns may be relevant in the aetiology of the disorder since these may easily be learned by members of such families.

Communication difficulties and suppressed emotions have also been identified by psychologists as important in health (Isichei & Zamani, 2000). Most somatising patients are known to have difficulties verbalising their emotions (McDougal, 1989) and have been described as operational thinkers (Marty & M'Uzan, 1963; Van der Kolk, 1994). Very young children with limited ability to verbalise emotions tend to somatise (Garber, Walker, & Zeman, 1991). Moreover, somatisation is noted to occur more in cultures in which verbal expression of emotion is discouraged (Kazarian & Evans, 2001); thus supporting the hypothesis that culture is important in the genesis of somatisation (Horney, 1939) Some studies (e.g., Westermeyer, Bouafuely, Neider, & Callies, 1989) have shown that persons from less verbally expressive Latin American and Asian cultures have higher incidence of somatisation than Caucasians. It has also been observed to be common in Africa (Ebigbo, 1989).

Personality characteristics have also been implicated in somatoform disorders. People with histrionic personality features - suggestibility, emotionality, excitability, self-centredness - tend to express somatic complaints (Slavney, 1990); and people high in neuroticism have also been shown to be susceptible to somatoform disorders (Kirmaya, Robbins, & Paris, 1994). Clinical experience as well as research (Rief, Hiller, & Margraf, 1998) reveals that people who somatise tend to introspect a lot and pay more attention to physical symptoms than other people (Barsky, 1992).

The personality types discussed above may predispose individuals to maximisation of somatic complaints, which in turn get reinforced by special attention from significant

others (Turk & Ruby, 1992); and thus are likely also to be stress-prone. Studies relating stressful life experiences to somatisation abound. For example, people with a history of posttraumatic stress disorder (PTSD) or history of sexual abuse may present with somatisation (Pribor, Yutzy, Dean, & Wetzal, 1993). High incidences of somatisation have been found among immigrants and refugees (Cervantes, Salgado de Snyder, & Padilla, 1989). It seems from the foregoing that somatisation arise from difficulty to adjust or cope with everyday demands, a situation that may lead to somatisation via the stress-biochemical axes.

Although there have been previous studies implicating stress in the aetiology of somatisation, many of the literature (e.g. Elklit & Christiansen, 2009) contain studies done with traumatised persons. The present research focused on those stresses arising from common everyday experiences. It needs to be determined whether these experiences relate to somatisation, and whether somatisation would vary across gender, with respect to stressful life events. Therefore, the predictor variables in this study were stressful life events, measured with the Life Events Inventory (Holmes & Rahe, 1967; Nweze, 1985), and gender; and the dependent variable, somatisation, was measured with the Enugu Somatisation Scale (Ebigbo, 1986). The hypotheses of this study were that (1) stressful life events would predict somatisation, and (2) that the effect of stressful life events on somatisation would vary across gender.

## **Method**

### **Participants**

A total of 102 non-academic staff of a Nigerian university participated in the study. They were drawn from various departments on the basis of availability and accessibility. All the participants were of the Igbo ethnic group. Majority of them were of low socioeconomic status, and were aged 18-65 years (range = 47years).

### **Instruments**

The Stressful Life Events Inventory (LEI) consisting of 28 items scored on a 5-point Likert type scale was completed by each participant. The LEI was originally developed by Holmes and Rahe (1967) as a 43-item checklist (the Social Readjustment Scale) to measure a person's total amount of recent life stress in life change units (LCU). The scale was adapted for local use in Nigeria by Nweze (1985). Additional instruction, "state as it applies to you in the past one year", was added by the Authors. The Enugu Somatisation Scale (ESS) is a 60-item scale developed by Ebigbo (1986) to measure somatisation. The scale was developed in Nigeria, and has been shown to be valid and reliable (Ebigbo, 1986; Onyeizugbo, 2007).

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### Procedure

Both inventories were distributed to participants at their places of work. To avoid hurried completion, each person was allowed a time space of two days to complete the inventories. Out of an initial 200 copies of a set of the inventories administered, only 102 (58 males and 44 females) were properly completed and included in the analysis.

### Design and Statistics

The study involved a cross-sectional design. Multiple regression analysis was performed on the data using the SPSS-X statistical package. The results obtained are as presented below.

### Results

The results of the analysis yielded an R value of 0.48 and a sufficiently large R<sup>2</sup> of 0.23, adjusted to R<sup>2</sup> = .22, indicating a strong association between the predictors (stressful life events and gender) and criterion variable (somatisation) in this study. Analysis of the regression shows that gender had a negligible effect on somatisation ( $F = 0.02, p > .05$ ). It also did not significantly interact with stressful life events ( $F = 1.50, p > .05$ ). However, the effect of stressful life events was significant,  $F = 2.55, p \leq .002$ .

Moreover, observed power of gender in the model is a negligible .052 (and  $p > .05$ ) compared to stressful life events' 0.997. We therefore accepted our first hypothesis that somatisation would be predicted by stressful life events; the second hypothesis that the effect of stressful life events on somatisation would vary across gender was rejected.

### Discussion

The results obtained in this study conform to stress theory and agree with some earlier studies (e.g., Cervantes, Salgado de Snyder, & Padilla, 1989; Pribor, Yutzy, Dean, & Wetzel, 1993) that related somatisation to stress. Since the participants in this study worked in the same institution and lived within the same community, some of the psychosocial inequalities that tend to exist between men and woman in developing countries were to some degree controlled for. This may partly account for the no significant difference in somatisation between men and women. Thus, the higher incidence of somatisation observed in females (Martin & Yutzy, 1999) may be due, not to biological characteristics, but to peculiar psychosocial experiences of women, or both. Chronic exposure to significant amount of stress may lead to certain disturbances in the stress biochemical axes (Chrousos, 1992; Dorn & Chrousos, 1993); thereby producing the somatic symptoms, gender notwithstanding.

These findings are important for conceptualisation, diagnosis, and management of functional somatic complaints. Somatisation may, in the absence of organ pathology, be understood to represent some psychophysiological reactions to stress. Thus the clinician should among other things evaluate client's presenting with somatic complaints for stress; efforts should be made to identify the certain stressful conditions in the life of the client/patient from which the somatising arises. Often times the sense of the symptoms

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and their associated conflicts are elucidated. In the experience of one of the present Authors, general approaches that prove effective in stress management such as cognitive re-labelling and relaxation therapy are effective in the management of psychogenic somatic complaints.

## Conclusion

Various attempts have been made to explain the phenomenon of psychogenic somatic complaints. Result of the present study tends to suggest a strong association between stressful life experience and somatisation in adults. Conditions that threaten the capabilities of a person may lead to disturbances in the biologic system that then produces the symptoms of somatisation. Moreover, men and women with similar life experiences are likely to experience somatisation, irrespective of gender. Somatisation may be viewed as the body's reaction to protracted stressful experience and should be managed as a stress disorder.

## References

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed.). Washington, DC.: Author.
- Barsky, A. J. (1992). Amplification, somatisation, and the somatoform disorders. *Psychosomatics*, 33, 28-34.
- Brown, G. W., & Harris, T. O. (1978). *Social origins of depression*. Tavistock: London.
- Cervantes, R. C., Salgado de Snyder, V. N., & Padilla, A. M. (1989). Posttraumatic stress in immigrants from Central America and Mexico. *Hospital & Community Psychiatry*, 40, 615-619.
- Cannon, W. B. (1953). *Bodily changes in pain, hunger, fear, and rage* (2nd ed.). Boston: C. T. Bradford and Co.
- Chaturvedi, S. K. (1987). Family morbidity in chronic pain patients. *Pain*, 30,159-168.
- Chrousos, G. P. (1992). Regulation and dysregulation of the hypothalamic-pituitary-adrenal axis: The corticotropin-releasing hormone perspective. *Endocrinology and Metabolism Clinic of North America*, 21, 833-858.
- Dom, L. D., & Chrousos, G. P. (1993). The endocrinology of stress and stress system disorders in adolescence. *Endocrinology and Metabolism Clinic of North America*, 22(3), 685-700.
- Ebigbo, P. O. (1986). A cross sectional study of somatic complaints of Nigerian females using the Enugu Somatization Scale. *Cultural and Medical Psychiatry*, 10(2), 167-186.

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- Ebigbo, P. O. (1989). Somatisation in cross-cultural perspective. In K. Peltzer & P. O. Ebigbo (Eds.), *Clinical psychology in Africa*. (pp. 233- 250). Enugu: Enugu Working Group for African Psychology.
- Elk1it, A, & Christiansen, D. M. (2009). Predictive factors for somatisation in a trauma sample. *Clinical Practice and Epidemiology in Mental Health*, 5, 1.
- Garber, J., Walker, L. S., & Zeman, J. (1991). Somatisation symptoms in a community sample of children and adolescents: Further validation of the Children's Somatisation Inventory. *Psychological Assessment*, 3,588-595.
- Gelder, M., Harrison, P., & Cowen, P. (2006). *Shorter Oxford textbook of Psychiatry* (5th ed.). Oxford: Oxford University Press.
- Guze, S. B. (1993). Genetics of Briquet's syndrome and somatisation disorder: A review of family adoption and twin studies. Sanibel Island symposium (1993, ft. Myers, Florida). *Annals of Clinical Psychiatry*, 5, 225-230.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213-218.
- Homey, K. (1939). *New ways in psychoanalysis*. London: Kagan Paul.
- Isichei, H. U., & Zamani, A E. (2000). *Stress: Health consequences and management techniques*. Jos: Fab Anie Nig. Ltd.
- Kazarian, S., & Evans, D. R. (2001). *Handbook of cultural health psychology*. Philadelphia: Elsevier Science and Technology Books.
- Kirmaya, L. J., Robbins, J. M., & Paris, J. (1994). Somatoform disorders: Personality and the social matrix of somatic distress. *Journal of Abnormal Psychology*, 103, 125-136.
- Lazarus, R. S., & Folkman, S. (1986). Cognitive theory of stress and the issue of circularity. In W. H. Krohne (2002), *Stress and coping theories*. Retrieved November 13, 2007 from, [userpage.fu-berlin. De/~schuez/foalienlkrohne\\_stress.pdf](http://userpage.fu-berlin.de/~schuez/foalienlkrohne_stress.pdf)
- Martin, R. L., & Yutzky, S. H. (1999). Somatoform disorders. In R. E. Hales, S. C. Yudofsky, & J. A Talbott (Eds.), *American psychiatric press textbook of psychiatry*. Wasington, D.e: American Psychiatric Press.
- Marry, P., & M'Uzan, de. (1963). La pensee operatoire. *Revue Francaise de psychoanalyse*. In Psychodynamic Diagnostic Manual Task Force (Ed.). (2006), *Psychodynamic diagnostic manual*. (p. 49). Silver Spring, MD: Alliance of psychoanalytic Organisations.
- Mayou, R., & Farmer, A. (2002). ABC of psychological medicine: Functional somatic symptoms and syndromes. *British Medical Journal*, 325, 265-268.
- McDougal, J. (1989). *Theatres of the body: A psychoanalytic approach to psychosomatic illness*. New York: Norton.

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- Noelen-Hoeksema, S. (1998). *Abnormal Psychology*. Boston, Massachusetts: McGraw-Hill.
- Nweze, A. (1985). Psychological stress and the mental health status of university students. *Nigerian Journal of Psychological Research*, 1, 75-86.
- Onyeizugbo, E. U. (2007). The University of Nigeria Stress Symptoms Scale. *Nigerian Clinical Psychologist*, 2, 7-10.
- Pribor, E. F., Yutzy, S. H., Dean, J. T., & Wetzel, R. D. (1993). Briquet's syndrome, dissociation, and abuse. *American Journal of Psychiatry*, 150, 1507-1511.
- Rief, W., Hiller, W., & Margraf, J. (1998). Cognitive aspects of hypochondriasis and the somatisation syndrome. *Journal of Abnormal Psychology*, 107, 587-595.
- Selye, H. (1950). *The physiology and pathology of exposure to stress*. Montreal: Acta Inc.
- Selye, H. (1985). The nature of stress. *Basal Facts*, 7, 3-11.
- Simon, G. (2000). Epidemiology of somatoform disorders and other causes of unexplained medical symptoms. In M. G. Gelder, J. J. Lopez-Ibor Jr., & N. C. Andreason (Eds.), *The new Oxford textbook of psychiatry*. (Chapter 5.2.2). Oxford: Oxford University Press.
- Slavney, P. R. (1990). *Perspectives on hysteria*. Baltimore: John Hopkins University Press.
- Tsigos, c., Kyrou, I., & Chrousos, G. P. (2004). *Stress, endocrine physiology*. Retrieved April 2, 2009 from, [www.endotext.com](http://www.endotext.com).
- Turk, D. c., & Ruby, T. E. (1992). Cognitive factors and persistent pain: A glimpse into Pandora's box. *Cognitive Therapy and Research*, 16, 99- 122.
- Van der Kolk, B. A. (1994). The body keeps score: Memory and the evolving psychobiology posttraumatic stress. *Harvard Review of Psychiatry*, 1, 253-265.
- Westermeyer, J., Bouafuely, M., Neider, J., & Callies, A. (1989). Somatisation among refugees: An epidemiologic study. *Psychosomatics*, 30, 34-43.