

## Concordance of Stress Among Married Couples in Urban Area of Nagpur, Maharashtra, India

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### Abstract

**Background:** Concordance or husband wife agreement on various factors like sleep, substance use, dietary supplement use, and diseases like obesity and hypertension has been extensively studied worldwide. But the data regarding concordance of stress among married couples in India is lacking.

**Objective:** The prime objective of this study was to find out proportion of concordance of stress among married couples in Nagpur, Central India.

**Methods:** This was a community based cross sectional study conducted in an urban area of Nagpur. 260 couples in whom both husband and wife were of the age 30 years or more were included. Stress among couples was assessed by Presumptive stressful life events scale (PSLES).

**Results:** 82.3% concordance of stress was observed. Getting married, birth of daughter, death of close family member, illness of family member, gain of new family member and going on pleasure trip or pilgrimage were most common events reported by both spouses. Pregnancy of wife was the most common event reported by husbands. Four husbands reported death of spouse as a life event. None of the spouses reported extra marital relation of spouse and conflict over dowry as life time events.

**Conclusions:** Concordance of stress was very high among couples. This suggests role of shared marital environmental factors, which could affect stress concordance among couples.

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## Introduction

People who live together come to resemble each other to a greater or lesser degree. This effect is called "cohabitational effect"; the resemblances come through the processes of living together. Cohabitation, or the sharing of the same or similar household environment, usually implies the sharing of many aspects of life style<sup>1</sup>. Married couples are pairs who are genetically non-related, but share the environment for a considerable period of time. Shared environmental factors may put cohabiting partners at risk of the same diseases, and this could have implications for screening and other interventions<sup>2</sup>. Interventions targeted at couples may be more effective than those targeted at individuals. Concordance for various factors have been studied worldwide, which include sleep, sexual decision making, substance use, dietary supplement use, and obesity, blood pressure and risk factors for atherosclerosis.<sup>3-7</sup>

The role of stressful life events in the etiology of various diseases has been a fertile field of research. Psychiatric epidemiology has gone through various stages of growth over the past few decades in India, starting from the first psychiatric epidemiological study by K.C. Dube<sup>8</sup> in 1961 at Agra, to the development of tools like the Present Status Examination (PSE)<sup>9</sup> and the Indian Psychiatric Survey Schedule (IPSS)<sup>10</sup>. A major advance in psychiatric epidemiology is the development of reliable and valid diagnostic interviews<sup>11</sup>.

Although stress research has typically looked at individuals in isolation, some investigators have argued that efforts at adaptation and coping should be viewed within the context of the larger systems of which they are a part<sup>12</sup>. The support that individuals receive and the coping processes that they use are determined in part by events in both, the immediate and the remote aspects of their social subsystems. It was with these ideas in mind that we sought to explore the proportion of concordance of stress among married couples in the urban area of Nagpur city, central India.

## Methods

This cross-sectional, community based study was conducted from May 2004 to April 2005, in Jaripatka, which is an urban area under Nagpur

Municipal Corporation. This area was selected for feasibility. The Ethics Committee of Indira Gandhi Government Medical College approved the study.

This is part of a broader study which was done to estimate prevalence of concordance of blood pressure among married couples. Study subjects were married couples in whom both husband and wife were of the age 30 years or more. Couples in whom the wife was pregnant and those in whom either or both spouses had secondary hypertension were excluded. Initially a pilot study was conducted to test the proforma and to have a rough estimate of the proportion of concordance of blood pressure. The proportion of concordance was found to be 64% in the pilot study. Expecting 20% non-participation, sample size came out to be 260 couples. A house-to-house survey was carried out. It was decided to start with the first house and cover all the houses till the required sample was reached. Informed written consent was obtained from the head of the household and the study subjects after explaining them the objectives of the study.

Stress was assessed by a self-administered questionnaire<sup>13</sup> (Presumptive Stressful Life Event Scale) developed by Gurmeet Singh et al. which was to be filled separately by both spouses.

Presumptive Stressful Life Event Scale(PSLES): The questionnaire consists of 51 life events; some events are commonly experienced by general population, e.g. death of close family member, getting engaged or married, illness of family member, etc. as compared to death of spouse, divorce and outstanding personal achievement which are experienced by less number of subjects in population. Similarly there are some items which are generally viewed as desirable, for e.g. marriage of daughter, expansion of business, etc., while some are viewed as undesirable by the population, e.g. extramarital relation of spouse, lack of child, etc. Pregnancy is one item which at times is considered desirable and at times undesirable depending upon whether it was wanted or unwanted pregnancy. There are some uncertain events called ambiguous items, which cannot be classified as desirable or undesirable, e.g. son or daughter leaving home, change in working conditions, retirement, etc. Study from an Indian

population suggests that an average individual experiences an average of ten common stressful events in a lifetime without suffering any obvious physical or psychological disturbance<sup>13,14</sup>. Hence concordance of stress was considered as both spouses having same number of life time events, i.e. <10 or ≥ 10.

## Results

A total of 287 families were visited in the survey of which 25 were not willing to participate, 14 were not eligible and 10 were not available. The required sample size of 260 couples was obtained in 238 families. All the couples were of Hindu religion. 75% husbands were businessman, mostly shop owners; 80% wives were housewife.

64.6% couples were married for 10-30 years duration. The minimum and maximum duration of marriage was found to be 6 months and 57 years respectively. As expected, mean age of husbands was more as compared to that of wives (Table 1).

Since the study unit was couple, both spouses of all 260 couples had to report getting married as a common event in their life (Table 2). Birth of daughter was the most common event reported (150 couples i.e. 58%), followed by death of close family member (31%), illness of family member (30%), gain of new family member (24%) and going on pleasure trip or pilgrimage (21%). As expected, pregnancy of wife was the most common event reported by husbands (83%). Four husbands reported death of spouse as a life event, which indicated their present marriage being a second

one. None of the spouses reported extra marital relation of spouse and conflict over dowry as life time events. As can be seen in table 3, concordance of stress (both spouses reporting <10 or ≥ 10 events) was found in 214 couples (82.3%).

## Discussion

The findings of present study are comparable to other studies as age distribution and mean age of study subjects are similar as reported by Speers MA et al<sup>15</sup> and Knuiman MW et al<sup>1</sup>. A high concordance of stress found in the present study is similar to Mitchell RE et al<sup>12</sup>, who found depressed patients' event and composite strain scores correlated moderately with those of their spouses (rs= .38 and .47, p< .001 in both cases); as did control couples' events and strain scores (rs= .34 and .47, p<.001 in both cases). Panda UK et al<sup>16</sup> studied stress among dual career couples and explored factors like excessive work load, conflicts and other reasons of stress, which also suggest shared environmental factors among husband and wife, as hypothesized in our study. Linedeman S et al<sup>17</sup> studied spousal resemblance for history of major depressive episode in the previous year, and found elevated spousal concordance for major depressive episode independent of risk factors assessed in their study. Toomey R et al<sup>18</sup> carried out study on spouses of US Gulf war veterans, and found greater risk for spouses mental disorders and distress for spouses of veterans with mental health disorders. Casu G et al<sup>19</sup> found that dyadic associations between support and stress were either direct or mediated by individual

Table 1. Mean age of husbands and wives according to duration of marriage

Duration of Marriage (Years)	No. of Couples (%)	Mean age (SD)	
		Husbands	Wives
< 10	21 (8.1)	36.0 (3.7)	32.1 (2.7)
10 - 20	77 (29.6)	41.6 (6.1)	36.9 (4.3)
20 - 30	91 (35.0)	49.8 (4.8)	43.7 (4.3)
30 - 40	49 (18.8)	57.8 (4.4)	51.3 (3.8)
≥ 40	22 (8.5)	67.8 (5.2)	61.6 (4.5)
Total	260 (100.0)	49.3 (10.0)	43.7 (8.9)

Table 2. Stress among husbands and wives

Life Event	No. of respondents		
	Husband	Wife	Both
Death of spouse	4	0	0
Extra marital relation of spouse	0	0	0
Marital separation/ divorce	1	0	1
Suspension or dismissal from job	7	4	0
Detention in jail of self or close family member	3	3	2
Lack of child	0	2	8
Death of close family member	38	18	80
Marital conflict	6	7	3
Property or crops damaged	3	5	2
Death of friend	11	2	1
Robbery or theft	3	1	9
Excessive alcohol or drug use by family member	4	13	10
Conflict with in-laws (other than dowry)	1	4	0
Broken engagement or love affair	1	1	0
Major personal illness or injury	60	36	42
Son or daughter leaving home	5	5	16
Financial loss or problems	11	10	2
Illness of family member	45	32	78
Trouble at work with colleagues, superiors or subordinates	9	1	0
Prophecy of astrologer or palmist etc.	7	10	3
Pregnancy of wife (wanted or unwanted)	217	-	-
Conflict over dowry (self or spouse)	0	0	0
Sexual problems	1	0	0
Self or family member unemployed	5	3	6
Lack of son	5	2	30
Large loan	7	2	1
Marriage of daughter or dependent sister	14	4	24
Minor violation of law	3	0	0

Family conflict	4	5	9
Break up with friend	8	1	0
Major purchase or construction of house	26	7	16
Death of pet	1	1	3
Failure in examination	0	2	0
Appearing for an examination or interview	9	6	1
Getting married or engaged	-	-	260
Trouble with neighbor	4	0	2
Unfulfilled commitments	5	3	0
Change in residence	12	41	42
Change or expansion of business	27	1	2
Outstanding personal achievement	9	5	2
Begin or end schooling	17	6	2
Retirement	39	3	2
Change in working conditions or transfer	27	6	2
Change in sleeping habits	18	26	1
Birth of daughter	12	14	150
Gain of new family member	24	9	63
Reduction in number of family functions	5	15	12
Change in social activities	12	4	1
Change in eating habits	13	13	6
Wife begins or stops work	9	16	1
Going on pleasure trip or pilgrimage	17	12	55

Table 3. Concordance of stress among husbands and wives

Life time events	No. of Couples (n= 260)	Percentage
H=W (<10)	202	77.7
H=W (≥10)	12	4.6
H>W	35	13.5
H<W	11	4.2

or partner coping, with differences based on gender, source of support, and coping strategy. For both genders, greater support from spouse was associated with lower individual and partner stress directly and indirectly, through lower partner's use of active-avoidance coping. Donoho CJ et al<sup>20</sup> in their study on military spouses found that their study findings characterize demographic, military, and service member psychological health factors that are associated with depression among military spouses. These findings imply that deployment alone may not negatively affect military spouses, but rather it may be the mental health impact on the service member, especially post traumatic stress disorder that increases the odds for major depressive disorder among military spouses.

### Strengths and Limitations

This is a community based study, and as per researcher's knowledge and extensive search for literature, no such study has been done earlier using a valid scale. Most of the studies are related to diseases among spouses, including depression, hypertension and the like, but studies assessing life events, as done in the present study, are scarce. Although the accuracy of the responses of the interviewed subjects cannot be demonstrated in this study, we have no reason to suppose that recall of events differed between the men and women. The study cannot be generalized to general population due to various reasons like small sample and restriction to urban setting.

Future research needs to be done on large samples, including rural areas as well, to see if such concordance exists in other areas also.

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