

WRITERS CRAMP IN OFFICE WORKERS—AN EPIDEMIOLOGIC AND PSYCHOSOMATIC STUDY

R. K. MAHENDRU¹ M. D. (PSYCHIAT.)

R. CHANDRA² M. D. (MEDICINE)

S. M. ALAM³ M. D. (MEDICINE)

P. C. RISHI⁴ M. B. B. S.

S. B. SINGH⁵ M. A., D. M. & S. P.

N. B. S. SARKARI⁶ M. D., M. R. G. P.

SUMMARY

The study is aimed at investigating the occurrence of writers cramp in office workers, drawn from ten major offices of Kanpur to determine the nature and relationship of various emotional factors in the development of this disability. The observations on writers cramp cases were compared with a group of normal and diseased controls. Out of a surveyed population of 3,325 office workers, there were 18 cases of writers cramp. Cramp cases scored significantly higher on all the subscales of Middlesex hospital questionnaire than the diseased and normal controls. Emotional stress of sufficient intensity was recorded in an increased percentage (66.70%) of writers cramp cases as compared to diseased and normal controls (53.3% and 46.7% respectively). The most frequent area of disturbance was severe maladjustment found in 38.9% of writers cramp cases, while in diseased and normal controls the type of stresses were of a different nature.

Writers cramp is usually considered a rare condition and is thought to occur less commonly in hospital out patient clinics than in the general population. However, it may be found more frequently in persons doing constant writing or typing work. Not much effort has gone towards determining the prevalence of this disability and knowledge is inadequate regarding its etiology.

Literature is scanty and the available published reports are inconclusive. Strumpell (1931) pointed out that the condition is often associated with a nervous constitution and that neurosthenic symptoms were often present in persons suffering from writers cramp. However, Culpin (1931) was the first person to report that almost all the subjects with writers cramp

were suffering from psychoneurosis and were characterized by anxiety, obsession or hysteria. Pai (1947) found his patients suffering predominantly from anxiety and hysterical reactions and tended to be timid and anxious type. Collier (1947) however, stated that cramp was either due to breakdown or to a disordered action of a part of central nervous system situated probably in optic thalamus. He was emphatic that neurosis or personal idiosyncrasy did not matter. Similarly Barre (1952) suggested that radicular irritation in the cervical spinal cord could be an important consideration.

The present report aims at studying the occurrence of writers cramp in the office workers of Kanpur city. An attempt has also been made to determine the per-

¹Lecturer in Psychiatry.

²Lecturer in Medicine.

³Lecturer in Medicine.

⁴P. G. Student.

⁵Clinical Psychologist-cum-Lecturer

⁶Reader in Medicine, B. R. D. Medical College, Gorakhpur.

} G. S. V. M. Medical College, Kanpur.

sonality traits of cramp cases and investigate the role of various emotional stresses in the development of this disability.

MATERIAL AND METHODS

The subjects for the present study consisted of office workers belonging to ten major offices of Kanpur City, located in different parts of the town. According to office attendance registers, all these ten offices had a total population of 16,625. The entire office population was serially numbered from 1 to 16,625 and with the help of Tippet random number table 3,325 sample units have been selected for survey in this study. Writers cramp is characterised by muscular spasm, incoordination and discomfort being variously described as weakness, stiffness or pain on attempting to write. There may also be tremor or jerking of the affected arm.

The cases without any evidence of an organic neurological disease were selected for the study. The patients thus selected were subjected to a detailed clinical history, physical examination and a thorough psychiatric assessment. Wherever possible other members of family and office colleagues were also interviewed.

The personality traits of all the individuals taking part in the study were measured by Middlesex Hospital Questionnaire (Hindi translation).

An attempt was also made to investigate any evidence of emotional stress occurring prior to the onset of writers cramp. Stress was regarded as exposure to situations stimulating anger, fear or anxiety of sufficient intensity to be recognised as such and recalled freely at the time of the interview.

It was also decided to study a more or less equal number of normal and diseased controls. 15 normal controls were selected from an office and 15 diseased controls were obtained from the Skin Department of L.L.R. Hospital, Kanpur. The controls were properly matched with writers cramp

cases for age, sex and socio-economic status. All the controls and writers cramp patients were studied in a uniform manner.

RESULTS

Twenty persons having writing difficulties were detected out of a surveyed population of 3,325. Of these, two patients who had organic neurological disturbances, one with cerebellar degeneration and the other with parkinsonism were excluded from the study. Thus the present study consisted of 18 patients of writers cramp giving a prevalence of 5.4 per 1000.

Majority of the subjects in experimental, normal and diseased controls consisted of Hindus of upper middle and middle socio-economic status, belonging to the age range of 31 to 50 years. Most of the subjects in all the three groups were married and graduates. Further, majority of the patients of writers cramp (83.3%) and normal controls (86%) were represented by clerks, stenographers and typists while in diseased controls this representation was little less (60%).

With regard to complaints, nearly 60% of writers cramp cases reported tremor only while 40% had tremor as well as pain during writing.

It was also observed that 12 patients of writers cramp developed illness gradually while 6 cases had a sudden onset. Nearly 5 % cases of writers cramp were ill for more than three years while in diseased controls the duration of illness was less than 3 years in all the subjects.

Table No. 1 and 2 indicate that the patients with writers cramp scored significantly higher on all the subscales of the Middle-Sex Hospital Questionnaire as compared to the diseased and normal controls.

It is also observed (as shown in Table 3) that a large number of patients of writers cramp (66.7%) demonstrated the presence of emotional stress prior to the onset of their illness, while nearly half of the dis-

TABLE 1—*Middle Sex Hospital Questionnaire*
(*M. H. Q.*)

Personality traits	Experimental Group (N=18)		Diseased Controls (N=15)		Normal Controls (N=15)	
	Mean	S. D.	Mean	S. D.	Mean	S. D.
Free Floating anxiety	8.4	3.0	1.7	0.9	1.7	1.7
Obsession	9.1	2.3	4.1	1.7	4.2	2.3
Depression	8.0	2.8	2.6	1.4	3.2	2.2
Phobia	8.8	3.4	3.1	2.3	3.1	3.0
Somatic	8.0	4.1	1.2	1.1	1.6	2.5
Hysteria	6.3	3.8	3.3	2.1	3.7	2.4

TABLE 2—*Statistical Analysis of M. H. Q.*
Scores

Personality traits	t ₁	P	t ₂	P
Free floating anxiety	8.2	<0.05	4.8	<0.05
Obsession	6.9	<0.05	6.05	<0.05
Depression	6.8	<0.05	6.3	<0.05
Phobia	2.61	<0.05	5.7	<0.05
Somatic	6.6	<0.05	5.3	<0.05
Hysteria	6.8	<0.05	2.9	<0.05

t₁—Comparison between experimental group and diseased controls.

t₂—Comparison between experimental group and normal controls.

TABLE 3—*Presence of Stress*

	Experimental Group (18)		Diseased Controls (15)		Normal Controls (15)	
	Stress	Non-Stress	Stress	Non-Stress	Stress	Non-Stress
Number	12	6	8	7	7	8
Percentage	66.7	33.3	53.3	46.7	46.7	53.3

eased and normal controls did not experience such a stress.

Table 4 shows that the most frequent area of disturbance observed in writers

TABLE 4—*Nature and frequency of various stresses*

Stress factors	Experimental Group (18)	Diseased Controls (15)	Normal Controls (15)
Recent death of parents	1 (5.6)	—	—
Death of wife	1 (5.6)
Death of Children	1 (5.6)
Any chronic or disabling illness in subjects	1 (5.6)
Any chronic or disabling illness in close family members	2 (11.1)	5 (33.3)	..
Law suits and court appearances	3 (16.7)	1 (6.7)	3 (20.0)
Heavy debts	3 (16.7)	2 (13.3)	1 (6.7)
Job difficulties	6 (33.3)	1 (6.7)	1 (6.7)
Marital disharmony	2 (11.1)
Maladjustment in family	7 (38.9)	1 (6.7)	2 (13.3)
Severe financial stress	3 (16.7)	5 (33.3)	5 (33.3)

Figures in parenthesis indicate percentage.

cramp patients was maladjustment in the family. This maladjustment included conflicts, quarrels, criticisms and disturbed relationship likely to disturb patients emotional state. Job difficulties, heavy debts and law suits were the next frequent stress factors associated with these patients.

In diseased and normal controls, the stresses were present but their quality seemed to be different. Severe financial stress was the most frequent area of disturbance in both the control groups.

It was also observed that most of these stresses in writers cramp patients occurred in the year preceding the development of the illness, while in the normal and diseased controls, the stresses were more chronic in nature and were present for a much longer time.

DISCUSSION

Since writers cramp is a rare condition in a clinic population, the present study was designed to investigate its occurrence in a specified section of the population. A prevalence rate of 5.4 per 1000 found in this study is well within expectation. Reports from other countries are not strictly comparable because of the different designs of their studies. It is, however, noteworthy that Ferguson (1971) reported a much higher frequency of this disturbance.

Most of the patients of writers cramp were adequately educated, belonging to the category of clerks, stenographers, telegraphists and typists. High occurrence of writers cramp in this category of workers is in agreement with the findings of Culpin (1931).

The study also reflects some interesting observations on personality pattern. The findings of this study as well as those of Culpin (1931) and Halliday (1943) have demonstrated the occurrence of large number of maladjusted personalities in patients with writers cramp.

The nature of stresses experienced by writers cramp cases seem to be very much different as compared to normal and diseased controls. Cramp cases showed mal-

adjustment in the family which included conflicts, quarrels, criticisms and disturbed relationship with other family members. On the other hand in control groups, severe financial stress was the major stress factor.

Although the present series is too small to draw any broad conclusion, there is sufficient evidence of the possible role of several psychological factors in the development of writers cramp. Identification of these factors may be helpful to the sufferers of this disability.

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