Medico-social challenges of ex-serviceman and their spouse: a cross-sectional study in Punjab

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Background: Due to arduous and hazardous nature of their duties in varied inhospitable terrain Ex-army servicemen are more prone to various psycho-somatic and chronic health problems, and they need assistance for resettlement, rehabilitation and adjustment in civil stream. **Objectives**: To study social and health problems of ex-army servicemen and their spouse. **Materials and Methods**: Descriptive cross-sectional study conducted in the month of May 2013, in mega health camp for Ex-army servicemen of two days organized by army in collaboration with Govt. Medical College Patiala. Total of 202 ex-army servicemen and their spouse were interviewed using pre-structured and pretested Proforma. Findings were statistically analyzed using percentages and p-value. **Results:** 202 participants, male (44.5%) and female (55.5%), with mean age 66.5± 6.2, almost 40% were illiterate. Male have significantly higher literacy. Almost 50% of the subjects have monthly income between 6,000-10,000Rs and very few were self-employed or reemployed. Three or more morbidities in 54.5% subjects and this association with age was statistically significant. The most common morbidities were hypertension/cardiovascular diseases (77.2%), and musculoskeletal (54.4%). 91.5% were on treatment and compliance to treatment was 80%. Around 33% subjects were feeling sad, mostly because of neglect (12%), poverty (6.4%) and loneliness (4%). **Conclusion**: Majority of Ex-army servicemen and their spouses were having multiple co-morbidities. Most of them were not involved in any productive job and have low income. Periodic screening of this high risk group and policy formulations at Govt level for their engagement in productive work is need of hour.

Keywords: Ex-army servicemen, Spouse, Morbidity, Statistical

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Vishal Malhotra, Senior Resident, Department of Community Medicine, Govt. Medical College, Patiala, Punjab, India. Email: drvishaldm@gmail.com	Malhotra V, Malhotra VM, Kaur S, Cheema R. Medico-social challenges of ex-serviceman and their spouse: a cross-sectional study in Punjab. Public Health Rev Int J Public Health Res. 2016;3(4):131-139. Available From https://publichealth.medresearch.in/index.php/ijphr/article/view/43	

Introduction

"Demographic transition" has produced pronounced results in form of population aging [1]. The life expectation at birth has shown an increase from "42 years in 1951-1960" to "58 years in 1986– 1990" which is recently projected to "67 years by 2011 – 2016 for males and 69 years for females" in India [2].

Aging has led to an increase in chronic conditions with advancing age from 39% in 60-64 year to 55% in those older than 70 year among Indian Population [3]. According to National Sample Survey organization (NSSO) report (2007-2008), overall percentage of elderly in India is 7.5% and is expected to be 12.4% in 2026 [4-5].

Army people are generally considered mentally and physically well but they are more prone to psychosomatic and other chronic health problems due to arduous and hazardous nature of their duties in varied inhospitable terrain. Moreover after leading well regulated life away from main stream they need assistance for rehabilitation and resettlement.

Though literature on geriatric morbidity is available, however to best of author's knowledge, very few studies have been done on morbidity profile of ex army servicemen, so an attempt is made to find chronic disease profile of ex-serviceman and their treatment adherence. Hence, there is growing need for further research to know the health problems of ex-army servicemen, so that suitable and timely interventions can be taken and policies can be formulated to meet their requirements. Hence the main objective is to study social and health problems of ex-army servicemen and their spouse.

Materials and Method

This is descriptive cross-sectional study which was conducted in month of May 2013, in mega health camp for Ex-army servicemen of two days organized by army in collaboration with Govt. Medical College Patiala.

Pre structured and pre- designed proforma was prepared to assess Socio-Demographic and morbidity profile of study subjects, after pre-testing proformas and making suitable alterations, proformas were filled by postgraduate student and interns of department of Community Medicine, Govt. Medical College Patiala after face to face interview with study subjects in local language.

Care was also taken to ensure privacy and confidentiality of the interview as part of study.

Interns were trained for the survey and survey was carried out under supervision of postgraduate student. Informed oral consent was taken from all participating subjects before the start of interview after telling them about the purpose of study. The beneficiaries of this health camp were ex-army servicemen only. Since the study was time bound with limited resources of medical education institution, hence a purposive, convenience sample was taken and a sample size of 202 respondents was decided upon.

Systematic random sampling was used and every second subject who comes to pharmacy to get prescription medicines after health checkup by specialist doctor was selected for interview. Prescription of doctor regarding the illness was checked and was taken into consideration for identifying illness.

Results

Socio-demographic Characteristics: Table 1 shows that 75% of subjects fall in age group of 60-79 years and only 4% were 80 years and above. Males constituted 44.5% with mean age of 67 years (SD$\pm$7.8) and females 55.5% with mean age of 66 years (SD$\pm$ 7.9). Majority of respondents were Sikhs (92.1%). Only 4.4% of males were widowed but 28.6% of the females were widowed. Almost 40% of study subjects were illiterate and just 5% were graduate or above. Almost 50% of study subjects have monthly income between 6,000-10,000 Most of them have pension as source of income and just 22% of total have other sources of income like agriculture land lease (26.7%) and from children (14.9%). Few were self employed (7.9%) and re-employed (4.4%).

Life style habits of study subjects: Table 2 shows that 73% study subjects were vegetarian; females are more vegetarian as compared to males. 46% males drink alcohol and just 9% were current smoker.

Health problems of study subjects: Table 3 and 4 shows distribution of leading causes of morbidities in study subjects.12.8% subjects have single disease/condition, two disease/condition (27%) and three disease/ condition (54%). Multiple morbidities were more common in subjects aged 70 or above as compared to subjects who were between 50-60 years and this trend increased with advancing age.

Most common morbidity was hypertension/ cardiovascular diseases (77.2%), musculoskeletal (54.4%), vision disorders (48.5%), endocrine/diabetes (28.7%), gastro-intestinal (16.9%), anemia (16.8%), respiratory (13%), mental health disorders (11.9%), ENT & dental problems (8%), genitourinary (5%), skin (3%). Anemia, hypertension, musculoskeletal, mental disorders and cataract were more common in females.

Treatment profile and adherence to treatment- Table 5 shows that most of ex-servicemen have free availability of medical treatment (95.5%) and were adherent to treatment regimen (78.2%), and just

12.87% were non complaint to the treatment. Compliance to treatment was less in females (19.6%), as compared to males (4.4%).

Reasons for feeling sad: Table 6 shows that 33.2% of respondents felt sad, and out of which 12% were sad due to neglect by their families, poverty (6.7%) and loneliness (4%). Other reasons for feeling sad were illness, alcoholic son/son in law, illness of spouse/children, no issue-no male issue, children staying away, death of spouse.

Since study subjects were ex-serviceman most of them have accessibility of medical treatment and were happy with their life.

Table 1: Socio-demographic profile of study subjects

Variables	Male (90)	%age	Female (112)	%age	Total (202)	% of total	df	c2	P value
Age distribution									
50-60	16	17.8	26	23.2	42	20.8	3	0.95	NS
60-70	44	48.9	52	46.4	96	47.5			
70-80	26	28.9	30	26.8	56	27.7			
80-90	4	4.4	4	3.6	8	4.0			
Total	90	100.0	112	100.0	202	100.0			
Religion									
Hindu	10	11.1	6	5.4	16	7.9	1	2.51	NS
Sikh	80	88.9	106	94.6	186	92.1			
Marital status									
Married	86	95.6	80	71.4	166	82.18	1	19.82	<0.001
Widowed	4	4.4	32	28.6	36	17.82			
Education									
Illiterate	12	13.3	70	62.5	82	40.6	4	95.47	<0.001
Primary	10	11.1	30	26.8	40	19.8			
Secondary	58	64.4	10	8.9	68	33.7			
Graduation	6	6.7	0	0.0	6	3.0			
Post graduation	4	4.4	0	0.0	4	2.0			
Source of income other than pension									
Self employed	10	11.1	6.0	5.4	16.0	7.9	3	8.91	<0.05
From children	10	11.1	20.0	17.9	30.0	14.9			
Agriculture	22	24.4	32.0	28.6	54.0	26.7			
Re-employed	4	4.4	0.0	0.0	4.0	2.0			
Total	46	51.1	58.0	51.8	104.0	51.5			
Monthly income									
<2000	2	2.22	8	7.1	10	4.95	3	17.405	<0.001
2000-5000	12	13.33	16	14.3	28	13.86			
6000-10,000	46	51.11	74	66.1	120	59.41			
>10,000	28	31.11	10	8.9	38	18.81			

Table-2: Life style habits of study subjects

Variables	Male (90)	%	Female (112)	%	Total (202)	%	df	c2	P value
Dietary Habits									
Vegetarian	48	53.3	82	73.2	130	64.36	1	8.6	<0.01
Non vegetarian	42	46.7	30	26.8	72	35.64			
Alcohol Intake									
Yes	42	46.7	0	0	42	20.79	1	65.9	<0.001
No	48	53.3	112	100	160	79.21			
Current Smoker									
Yes	8	8.9	0	0	8	3.96	1	10.4	<0.01
No	82	91.1	112	100	194	96.04			

Table- 3: Distribution of study subjects as per number of morbidities

Age (years)	Number (N)	No morbidity	Single disease (N)	%age	Two disease	%age	Three disease	%age	df	c2	P value
50-60	42	6	8	19	14	33.33	14	33.33	9	24.47	<0.01
60-70	96	4	16	17.39	24	26.09	52	56.52			
70-80	56	0	2	3.6	16	28.57	38	67.86			
80-90	8	0	0	0	2	25	6	75			
	202	10	26	12.87	56	27.72	110	54.46			

Table- 4: Morbidity profile of ex-army servicemen and their spouses

Morbidities	Male (90)	%	Female (112)	%	total (202)	% of total	c2	P value
Anemia	8	8.9	26	23.2	34	16.8	7.31	<.01
Cardiovascular problems								
Hypertension	48	53.3	74	66.1	122	60.4	3.38	NS
Angina/I.H.D	18	20.0	16	14.3	34	16.8	1.163	NS
Gastro- intestinal problems								
APD	6	6.7	24	21.4	30	14.9	8.59	<.01
Piles	2	2.2	0	0.0	2	1.0	2.78	NS
Chronic constipation	2	2.2	0	0.0	2	1.0	2.51	NS
Musculoskeletal problems								
Osteoarthritis	28	31.1	44	39.3	72	35.6	1.45	NS
Lower back ache	2	2.2	20	17.9	22	10.9	12.75	<.001
Gout	4	4.4	6	5.4	10	5.0	0.213	NS
Cervical spondylitis	4	4.4	2	1.8	6	3.0	1.303	NS
Mental Health problems								
Anxiety Neurosis	2	2.2	10	8.9	12	5.9	4.22	<.05
Depression	2	2.2	4	3.6	6	3.0	0.536	NS
Alcohol dependants	6	6.7	0	0.0	6	3.0	7.63	<.01
Respiratory problems								
Bronchial Asthma	6	6.7	4	3.6	10	5.0	1.057	NS
Allergy	4	4.4	2	1.8	6	3.0	1.303	NS
Bronchitis	4	4.4	2	1.8	6	3.0	1.303	NS
COPD	2	2.2	2	1.8	4	2.0	0.283	NS
Diabetes	34	37.8	24	21.4	58	28.7	6.51	<.01
Cataract	26	28.9	36	32.1	62	30.7	0.248	NS
Reduced vision/refractive errors	18	20.0	18	16.1	36	17.8	0.528	NS
ENT problems	2	2.2	8	7.1	10	5.0	2.77	NS
Dental problems	6	6.7	0	0.0	6	3.0	7.63	<.01
Genitourinary problems								
BPH	8	8.9	0	0.0	8	4.0		
Calculus	0	0.0	2	1.8	2	1.0	2.32	NS

Skin problems	2	2.2	4	3.6	6	3.0	0.536	NS
Cancers	0	0.0	2	1.8	2	1.0	2.328	NS
Gall stones	0	0.0	8	7.1	8	4.0	7.013	<.01
Stroke	0	0.0	2	1.8	2	1.0	2.32	NS

Table -5: Treatment profile of Ex-army servicemen and their spouse (n=101)

Category	Male (90)	%	Female (112)	%	Total (202)	% of total	df	c2	P value
Not on Treatment	10	11.1	8	7.1	18	8.96	1	0.97	NS
On treatment	80	88.9	104	92.9	184	91.54			
Treatment adherence									
Complaint to treatment	76	84.44	82	73.2	158	78.22	1	7.45	<0.05
Not complaint to treatment	4	4.44	22	19.6	26	12.87			

Table -6: Reasons for feeling sad of study subjects

Reasons	Male (90)	%age	Female (112)	%age	total (202)	% of total	df	c2	P value
Illness	2	2.2	2	1.8	4	2.0	8	7	NS
Neglected	8	8.9	16	14.3	24	11.9			
Loneliness	2	2.2	6	5.4	8	4.0			
Alcoholic son/ son in law	2	2.2	2	1.8	4	2.0			
Illness of spouse/children	2	2.2	2	1.8	4	2.0			
No issue- no male issue	0	0.0	2	1.8	2	1.0			
Children staying away	0	0.0	2	1.8	2	1.0			
Death of spouse	0	0.0	6	5.4	6	3.0			
Poverty	5	5.6	8	7.1	13	6.4			
Total	21	23.3	46	41.1	67	33.2			

Discussion

In present study of 202 ex-servicemen and their spouse, females were more widowed and this was statistically significant. Majority of males were literate and more of them were employed in productive work as compared to females, the results were found to be similar to study conducted by Kaur et al. [6]. In present study almost 50% of ex-serviceman has sources of income other than pension mainly from agriculture lease and from children support and very less was employed.

Majority of them have low monthly income. The study observed statistically significant higher literacy and employment in men than in women similar to study [6]. The study observed statistically significant vegetarianism among women than in men, similar to study done at Sultanpur Lodhi in Kapurthala district of Punjab [6].

The present study showed trend of increase in number of morbidities with advancing age, and this association with age was statistically significant, similar to other studies [7, 8]. Most common morbidities in study subjects were hypertension and musculoskeletal problems which were higher in females.

Backache was significantly higher in females than males in current study. Similar results were reported in studies of South India [9, 10].

Another study done in Punjab reported musculoskeletal disorders in 38% of subjects [6]. Kumbhar et al. [11] also showed these two morbidities as commonest in ex-servicemen though with lower prevalence. Ocular disorders were third major morbidity and comparable results were reported in earlier studies [7, 12-13].

Diabetes was fourth most common morbidity, statistically significant in males than in females [6, 9]. A much less prevalence of 7% was shown by study done in Sangli in Maharashtra [11]. Anemia, Acid Peptic Disease (A.P.D) and gallstones was statistically significant in females [11, 6], though Kumbhar et al. [11] showed lower prevalence of A.P.D.

Mental health disorders with overall predominance of anxiety neurosis was significantly higher in females (8.9%), and was double than that reported from Maharashtra [11]. Other system problems like ENT, dental, genitourinary, skin and cancers were less than 10% [7, 11].

There is easy availability and accessibility of medical services to ex-servicemen and their spouse as shown in table 5, with significantly higher number of males adherent to treatment regime than females.12.8% were not taking treatment regularly being not satisfied with attitude of treating physician and also not getting any relief from treatment due to long duration of their ailments. Most of study subjects utilize health care services from public sector.

In our study one third of the respondents were not happy with their life as compared with 53.2% and 48% reported by Singh *et al*. [14] and Lena *et al*. [10] respectively. In current study 12% of subjects felt neglected by their family in contrast to other studies [14, 15]. Around 7% subjects were sad because of poverty and 4% due to loneliness which is much less compared to other studies [10, 15-14].

The current study was done in ex-servicemen who probably because of nature of their job stayed away from their families and were better adapted to living alone compared to other studies done in civilians. Also better medical services and social security in form of pension make ex servicemen more equipped to deal with illness and poverty as reflected in current study where 70% of ex-servicemen were happy with their life.

Limitations

It is a cross-sectional study with relatively small sample size and study subjects were ex-army serviceman and their spouses attending mega camp with various health problems, study findings cannot be generalized to the community at large. Further Research involving bigger sample size and qualitative research is required to extrapolate the results and to explore the depth of health problems in ex-servicemen.

Conclusion

There is rising prevalence of chronic diseases in elderly population which will be major burden in future on health care services of country. Majority of Ex-army serviceman and their spouses were having multiple co-morbidities, hypertension and musculoskeletal disorders. Most of them were not involved in any productive job after retirement and have low income in spite of having pension, so there is increasing dependence on their children more so by females leading to a state of neglect in these ex-servicemen.

There should be periodic screening of ex-serviceman for diseases like hypertension and more such outreach camps be organized for health education regarding these chronic non-communicable diseases. The government should form some policy to provide re-employment to ex-army servicemen, so that they can live socially and economically productive life after retirement.

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