PSYCHIATRIC MORBIDITY, STRESSFUL LIFE EVENTS (SLE), COPING STYLES OF ELDERLY ADULTS LIVING IN AN URBAN COMMUNITY - A CROSSSECTIONAL AND COMPARITIVE STUDY.

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ABSTRACT

While research has documented the adverse effects of life events on depressive symptoms and cognitive function less research has explicitly examined such links among older adults. This study was planned to study the number, type of life events, quantify the stress produced by the life event, coping stress adopted by the elderly adult with psychiatric morbidity and compare it with those without psychiatric morbidity. This is a crosssectional study carried out on 50 elderly adults between 23rd February to 23rd April, living in urban community, Moula-ali Hyderabad. The study sample was selected by simple random sampling and those who met inclusion criteria were assessed on GHQ, MMSE, MINI-plus, PSLES, CCL. Prevalence of psychiatric morbidity among elderly adults living in urban community was found to be 26%. Stressful life events (SLE) were statistically significantly more in those with psychiatric morbidity (100%) than those without psychiatric morbidity (67.5%) (p = 0.02). Mean stress scores were high in elderly with psychiatric morbidity (p value = 0.04). The mean number of SLE were more in those with psychiatric morbidity (3.56) than those without (2.25). Elderly with psychiatric morbidity reported health related SLE (61.53%) and in those without psychiatric morbidity, non health related SLE (52%) were reported as the most stressful. Elderly with psychiatric morbidity who reported health related stressor, adopted emotion focused coping and the association was statistically significant (p = 0.02). Sociodemographic factors were matched across two groups. Elderly adults presenting with psychiatric problem must be screened for stressful life events and counseled accordingly.

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INTRODUCTION

Worldwide increase in longevity has shifted the age distribution towards older population.[Land KC 2008] It is projected that between 2000 and 2050 the proportion of world’s older adults is estimated to double from 11% to 22%, producing an increase from 605 million to 2 billion people over 60 years.[WHO Mental Health and older adults factsheet dated 7.9.2014]

In India the size of the elderly population that is persons above the age of 60 years has increased from 76 million in 2001 to 100 millions in 2011.[Situational analysis of elderly, 2014] The Indian elderly is currently the second largest in the world.[WHO Mental Health]

The most common neuropsychiatric disorders in elderly are dementia and depression. Anxiety disorders in 3.8%, substance abuse disorders in 1%. [WHO Mental Health and older adults factsheet dated 7.9.2014] Risk factors leading to depression in elderly comprise complex interactions among genetic vulnerability, cognitive diathesis, age associated neurobiological changes and stressful life events.[Fiske A, 2009] (From flow diagram-1)

Flow Diagram

**Risk factors for late life depression**

**Health related stressors**
- Limited mobility,
- Chronic pain,
- Cardio Vascular diseases

**Non Health related stressors**
- Bereavement
- Low socioeconomic status
- Retirement
- Interpersonal problems

**Vascular depression**

**Psychological distress**
- Depression
- Psychiatric morbidity

**Physical problems**

Stressful life events either aggravate or precipitate depression or cause depression in those who are predisposed. A number of studies have revealed a clustering of events during the period preceding the onset of depression in their group of depressed patients than controls.[Brown GK, 2002, Patric V, 1978]. Stressful life events may be health related (cardiovascular problems, limited mobility due to chronic pain, disability due to neurological problems) or nonhealth related (bereavement, low socioeconomic status, interpersonal problems).[WHO Mental Health and older adults factsheet dated 7.9.2014]. A meta analysis of prospective studies of depressive symptoms and disorders in adults aged 50 or older found that bereavement more than tripled the risk of depression, with the largest size of any risk factors examined.[Cole MG, 2003]. Some researchers say that older adults are more likely than younger adults to resolve regrets associated with loss and such resolution has been linked to better adaptation after the loss.[Torges CM, 2008] This may be due to socioemotional selectivity [Carstensen, 2000] and wisdom.[Baltes P, 2000] Compared to women, men are likely to become depressed longer. This outcome may be due to the fact that the loss of spouse involves different strains for men and women, reflecting their different roles in marriage.[Umberson D, 2006] Socioeconomic factors play an important role in late life depression. Deterioration in financial status is one among the most frequently endorsed stressful life events experienced by older adults.[Fiske A, 2003] Older adults who are economically disadvantaged are most likely to experience persistent depressive symptoms consistent with chronic nature of stressors associated with low income including financial strain and exposure to unsafe and unstable environments.[Mojtabai R, 2004] The process by which a person attempts to manage stressful demands is called Coping strategies. The coping strategies are classified into two types. One is problem focused in which the person attempts to deal with stressor constructively by using cognitive and behavioural efforts and alters stressful situation, another one emotion focused coping is to reduce the distress produced by a stressful situation.[Brehm, 1999]. Problem solving strategy decreases, stress and emotion focused coping by their defensive nature increases stress.[Lazarus, 1966] Studies have noted that older people tend to rely more on emotion focused coping as opposed to problem solving coping. This is because problems older face are often less changeable than those of younger adults, and when the type of problem is equated across ages differences in coping styles are reduced or eliminated.[Staudinger UM, 2000] When the elderly cannot change the situation, they change their perception about the problem and try to give it another meaning such coping is called emotion focused coping.[Duner A, 2002]. There has been paucity of studies relating stress full life events and psychiatric illness especially in elderly. There were hardly any studies comparing coping styles of elderly with and without psychiatric morbidity. Coping strategies play a main role in facing problems. But at the same time, it has to
be dependent up on situation and ability of a person, mindset of a person. This study was carried out to study and compare stressful life events, coping styles adapted by elderly adults with and without psychiatric morbidity living in urban community, Moulali, Hyderabad, Telangana. The main aims and objectives of the study are:

1) To study the number, nature, severity of stressful life events experienced by elderly adults with psychiatric morbidity and compare it with those without psychiatric morbidity in an urban community.
2) To study coping strategies utilized by elderly while dealing with stressful life events (SLE).
3) To compare coping strategies utilized by elderly with and without psychiatric morbidity.
4) To compare sociodemographic factors across the two groups.

MATERIALS AND METHODS:
Type of study: cross-sectional and comparative study
Type of sample: the sample was collected from urban community, Hyderabad. The study was conducted from 23rd March to 23rd May 2014. Subjects were selected by simple random sampling technique. Every alternate house was selected, if the house was locked or do not have any elderly adults next alternate house was selected. Elderly adults were defined as those aged 60 years and above.

INCLUSION CRITERIA:
1) age above 60 years.
2) give consent and cooperative.
3) not having speech and comprehension defects.
4) having informant.

EXCLUSION CRITERIA:
1) age below 60 years.
2) did not give consent and not cooperative.
3) having communication defects.
4) not having informant.

The total sample screened was 100 out of which 12 did not give consent, 14 were staying alone and did not have informant, 15 had communication defects, 9 had aphasia. The size of the study sample was 50. Informed consent was taken from all participants who were included in the study. After obtaining consent, each person was interviewed on sociodemographic data sheet. Then all those included in the study were screened for psychiatric morbidity using GHQ-30 [Goldberg, 1992], those who scored more than 11 were subjected to MINI-plus [Sheehan DV, 1998] for assessment of Axis-I disorders. MMSE [Folstein MF, 1975] was administered to assess cognitive impairment in all subjects, those who scored less than 24 were given MINI-plus for assessment of Organic brain disorder. Presumptive Stressful life events scale (PSLES) [Singh G, 1984] was given to all subjects to assess stressful life events which occurred 1 year before the date of assessment. Number of life events, mean stress score, type of stressful life events (SLE) severity of stress from 0 as no stress to 4 as most stressful were noted. Actual occurrence of life events were corroborated from the spouses or the other family members. Coping check list (CCL) [Rao K, 1989] was given to all subjects to know the coping strategy used in stressful life events.

RESULTS AND DISCUSSION
The total number of urban elderly adults included in our study are 50. Thirteen (26%) elderly subjects were found to have psychiatric morbidity, 10% dementia, 8% depression, 2% anxiety, 2% schizophrenia, 4% substance abuse (alcohol) as per MINI plus (Table – 1).
Table – 1 showing prevalence psychiatric morbidity in urban elderly.

<table>
<thead>
<tr>
<th>Psychiatric morbidity (n=13)</th>
<th>Prevalence (n=13) (26%)</th>
<th>Percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dementia(Organic brain disorders)</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Mood disorder</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Substance abuse disorder</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>No psychiatric illness (n=37)</td>
<td>37</td>
<td>74%</td>
</tr>
</tbody>
</table>

Various studies have been carried out in India to study the prevalence of mental illness in elderly was found to be 2-43% [Dube, 1970],[Tiwari, 2012]. The variation in prevalence is largely due to sample size, location of study population and diagnostic criteria.

Pie chart showing prevalence of psychiatric morbidity in urban elderly

All the subjects with psychiatric morbidity (100%) reported stressful life events (SLE). Twenty five elderly (67.55%) of those without psychiatric morbidity reported stressful life events (SLE) Table – 2). The association between SLE and Psychiatric morbidity was found to be significant (p=0.02) (Table – 2). However it may also be partly because psychiatric morbidity might have coloured their perception. Elderly with psychiatric morbidity reported more number of stressful events(mean SLE-3.5), whereas elderly without psychiatric morbidity reported less SLE(mean SLE-2.25). This is in line with study by Murphy [1982] which stated that more depressed patients from community and hospital experienced stressful life event in the preceding year when compared to normal group from community. This is not in keeping with findings of Barnes and Wise [1991] who found that there was no interaction between life events and depression in elderly.

Table – 2 showing stressful life events across both groups.

<table>
<thead>
<tr>
<th></th>
<th>Stressful life events (SLE)</th>
<th>Present</th>
<th>Absent</th>
<th>Chisquare</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric morbidity (n=13)</td>
<td></td>
<td>13(100%)</td>
<td>0</td>
<td>5.54</td>
<td>0.02*</td>
</tr>
<tr>
<td>Without psychiatric morbidity (n=37)</td>
<td></td>
<td>25 (67.5%)</td>
<td>12(32.44%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean stress score given as per PSLES (Presumptive Stressful Life Events Scale) was noted for all stressful life events named by elderly adults in both groups. The total score obtained by each elderly by adding all the applicable life event scores. Accordingly they were categorized into no stress – upto 40; moderate stress – 41 – 200; severe stress -> 200 in both groups. Mean stress scores of elderly adults with psychiatric morbidity showed 91% in moderate stress, 9% in severe stress. In elderly adults without psychiatric morbidity group, 56% showed no stress, 32% moderate stress, 12% severe stress. The mean stress scores among elderly with psychiatric morbidity were more than in those without psychiatric morbidity. The association is statistically significant (p value = 0.04) – (Table – 3)
Table 3 showing Mean stress scores across both groups.

<table>
<thead>
<tr>
<th>PSLES</th>
<th>Mean Stress Scores</th>
<th>Elderly adults With psychiatric morbidity</th>
<th>Without psychiatric morbidity</th>
<th>Chisquare</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No stress</td>
<td>0-40</td>
<td>0</td>
<td>14 (56%)</td>
<td>4.78</td>
<td>0.04*</td>
</tr>
<tr>
<td>Moderate Stress</td>
<td>41 – 200</td>
<td>9 (91%)</td>
<td>8 (32%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe stress</td>
<td>&gt;200</td>
<td>4 (9%)</td>
<td>3 (12%)</td>
<td>1.112</td>
<td>0.5</td>
</tr>
</tbody>
</table>

That means as stress increases, psychiatric morbidity increases. Our study is in consonance with study by Agarwal [2002] that mean life event score was statistically significantly higher in study group than control group.

Elderly were asked to rate the most stressful life event which they experienced in past 1 year. Subjects with psychiatric morbidity (61.53%) rated health related stressor as the most stressful on followed by non health related events like bereavement in 23.07%, financial crisis in 15.38%. Those without psychiatric morbidity named non health related stress or -52% (bereavement -20%, financial crisis-32%) as most stressful followed by health related stressor in 48%. The association between psychiatric morbidity and nature of SLE (Stressful Life Event) was not statistically significant (p value =0.5) (table – 4). Similar results were found Aldwin,Krause,[1990] that the most stressful life events that older adults confront are health related, interpersonal, financial crisis.

Table 4 showing nature of SLE (stressful life events) across both groups.

<table>
<thead>
<tr>
<th>Nature of SLE</th>
<th>With psychiatric morbidity (n=13)</th>
<th>Without psychiatric morbidity (n=25)</th>
<th>Chisquare</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health related</td>
<td>8(61.53%)</td>
<td>12(48%)</td>
<td>1.112</td>
<td>0.5</td>
</tr>
<tr>
<td>Non health related</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bereavement</td>
<td>3(23.07%)</td>
<td>5(20%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial crisis</td>
<td>2(15.38%)</td>
<td>8(32%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph showing stressful life events across elderly with and without psychiatric morbidity

75% of elderly subjects with psychiatric morbidity who had health related SLE reported to have used emotion focused coping (Avoidance). Only 25% of elderly with psychiatric morbidity reported problem focused coping. In elderly adults without psychiatric morbidity, 75% facing health related stressor reported problem focused coping, 25% avoidance coping (emotion focused). The association between psychiatric morbidity and coping strategy used was statistically significant with respect to the health related stressor (p value =0.02). 100% of elderly adults (with psychiatric morbidity group) who reported non health related stressors like bereavement and financial crisis as the most stressful life event reported that they have used emotion focused coping. In elderly (without psychiatric morbidity group) who had bereavement as (most stressful SLE), 60% reported problem solving coping, 40% avoidance sub-type of emotion focused coping.

Elderly who had financial crisis as the most stressful SLE, 25% reported to have used problem solving 50% emotion and problem focused (social support) 25% reported to have used avoidance subtype of emotion focused coping (Table – 5) This is in line with several studies of old aged adults that those who favour avoidance coping are more likely to experience depression and distress.[Felton BJ,1990]
Table – 5 showing nature of SLE and coping strategy followed across both groups.

<table>
<thead>
<tr>
<th></th>
<th>Problem solving</th>
<th>Emotion focused</th>
<th>Problem emotion focused &amp; Chisquare</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health related stressor</td>
<td>With psychiatric morbidity</td>
<td>2(25%)</td>
<td>6(75%)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Without psychiatric morbidity</td>
<td>8(75%)</td>
<td>4(25%)</td>
<td>0</td>
</tr>
<tr>
<td>Non health Bereavement</td>
<td>With psychiatric morbidity</td>
<td>0</td>
<td>3(100%)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Without psychiatric morbidity</td>
<td>3(60%)</td>
<td>2(40%)</td>
<td>0</td>
</tr>
<tr>
<td>Financial crisis</td>
<td>With psychiatric morbidity</td>
<td>0</td>
<td>2(100%)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Without psychiatric morbidity</td>
<td>2(25%)</td>
<td>2(25%)</td>
<td>4(50%)</td>
</tr>
</tbody>
</table>

Some studies say that avoidance coping may be more effective in situations that are more threatening and less controllable such as health related crises.[O Rourke , 2002]An alternate view is that almost all stressful situations encompass opportunities for problem solving coping either with situation itself or it's consequence. For example a health crisis calls for problem solving such as making decisions about treatment ,how to be assertive with doctors,planning life style changes.However ,given the sometimes intractable events older adults confront and their increasingly limited resources ,adoption of a consistent approach problem solving coping may be maladaptive for them .[Isacowitz DM,2001]. Sociodemographic factors were matched across the two groups in order to nullify the effect of these factors on psychiatric morbidity.

The elderly subjects with and without psychiatric morbidity were compared on sociodemographic factors. There was no statistically significant association between sociodemographic factors across both groups indicating that both groups are matched for occurrence of psychiatric morbidity apart from life events. (table – 6) Sociodemographic factors were matched across the two groups in order to nullify the effect of these factors on psychiatric morbidity.

Table 6 – showing sociodemographic factors across both groups.

<table>
<thead>
<tr>
<th>Sociodemographic factors</th>
<th>With psychiatric morbidity</th>
<th>Without psychiatric morbidity</th>
<th>Chisquare</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-69 years</td>
<td>8</td>
<td>12</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>70–79 years</td>
<td>4</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 80 years</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>10</td>
<td>1.08</td>
<td>0.6</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illitrates</td>
<td>2</td>
<td>9</td>
<td>1.76</td>
<td>0.5</td>
</tr>
<tr>
<td>Literates</td>
<td>11</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>5</td>
<td>11</td>
<td>0.9</td>
<td>0.1</td>
</tr>
<tr>
<td>Unmarried/Widow/Single</td>
<td>8</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio economic stauts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>8</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>4</td>
<td>7</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Lower</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint</td>
<td>9</td>
<td>15</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Nuclear</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

(1) The prevalence of psychiatric morbidity among elderly adults living in a urban community was found to be 26% in our study.
(2) All the elderly adults (100%) with psychiatric morbidity reported stressful life events SLE) .67.55% (25) elderly without psychiatric morbidity reported SLE.
(3) Elderly with psychiatric morbidity group reported more number of SLE , high mean stress scores than without psychiatric morbidity.
(4) Healthrelated SLE were more common in elderly with psychiatric morbidity .non health related SLE in without psychiatric morbidity group.
(5) Elderly with psychiatric morbidity adopted avoidance subtype of emotion focused coping without psychiatric morbidity group adopted problem solving.
(6) Sociodemographic factors were evenly matched across both groups.
DRAWDACKS OF OUR STUDY:
(1) Our study did not assess outcome of elderly after using coping strategy, how they felt after using particular coping strategy, what they could achieve. Chronic SLE were not assessed, only SLE which occurred in 1 year before study were assessed. Longitudinal prospective study would be ideal to study the outcome and influence of chronic stressors.
(2) Social support was not assessed.
(3) Elderly with psychiatric morbidity may be perceiving events as stressful under the influence of their mind.
(4) Size of sample is small and hence cannot be generalised.
(5) Personality traits were not assessed, perceiving an event as stressful may be colored by personality traits.

RECOMMENDATIONS FOR FUTURE RESEARCH:
Elderly adults presenting to Geriatric clinics will have to be routinely screened for stressful life events. It is recommended that further studies should focus on outcome of using particular coping strategy and also on impact of chronic stressors on development of psychiatric illness. Coping enhancement programs can be provided for elderly to instil hope, to manage stress effectively. Such programs also need to be evaluated whether they reduce depression and distress, and how new found coping skill help to resolve stressor.

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REFERENCES