

# Social cases?

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## Abstract

This was a cross-sectional descriptive study of in-patients over the age of 60 years at St. Luke's hospital who were deemed to be social cases (SC). The majority (58.4%) were female and the mean age was 80 years (range 60-92, SD: 6.7 years). Most (80%) were found in medical wards. The mean length of stay was 22.5 days (range 1-290 days, SD: 36.4 days).

Social cases were a frail group with a mean number of co-morbidities of 2.8 (range 0-6, SD:1.5). Dependency level was also high with a mean Barthel score of 6.8 (range 0-20, SD: 7.4).

A diagnosis of dementia was documented on the patient's medical record in only 12%. However significant low Abbreviated Mental Test scores were found in 64% (mean AMT 5.0, range 0-9, SD: 2.8).

These findings illustrate that most social cases at St. Luke's Hospital are not only there for 'social' reasons but also have other factors involved, including a high dependency level in activities of daily living which hamper their discharge to the community. Rehabilitation using an interdisciplinary approach may help the less dependent return to the community.

## Keywords

Social cases, Abbreviated Mental Test, Barthel score, Activities of Daily Living

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## Aims

The aim of the study was to gather demographical data regarding patients labelled as SC, to assess the level of dependency plus cognitive function and to describe associated co-morbidity.

## Introduction

A social case (SC) in Malta may be defined as a patient who no longer needs to occupy an acute bed and whose discharge is proving problematic, or who is awaiting transfer to another institution, usually for chronic care.<sup>1</sup> News articles in local newspapers have highlighted the importance of this problem.<sup>2</sup> The main problem is that a SC occupies a bed that might be used by a patient who requires acute medical treatment.

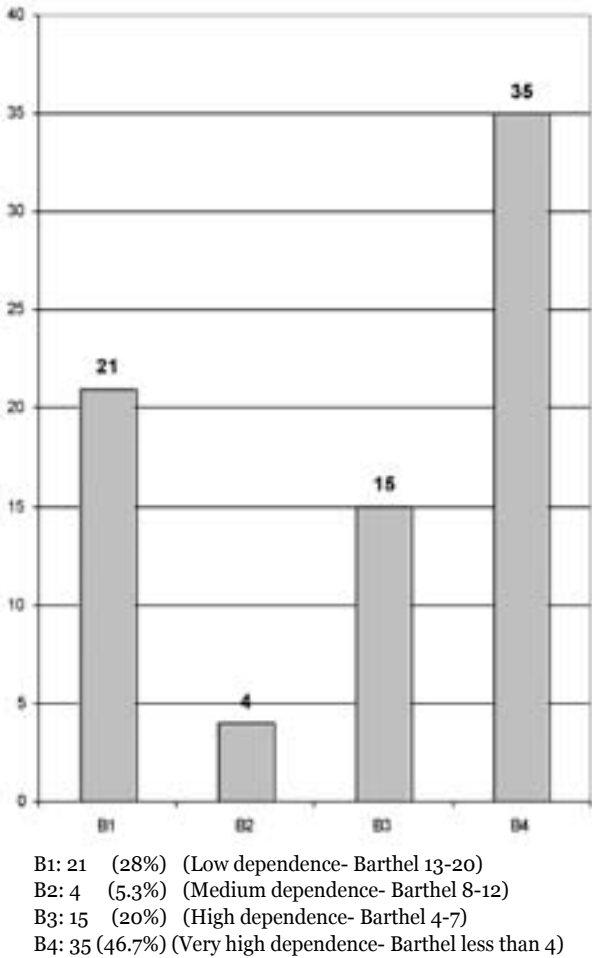
There are few studies to date that mention SC at St Luke's Hospital, Malta.<sup>1</sup> This may be due to a lack of interest in the problems pertaining to this cohort of patients or to a sense of disownment by the health professionals concerned. This phenomenon is in contrast to other countries like the UK.<sup>3-5</sup>

## Methodology

A cross-sectional descriptive study was undertaken at St Luke's Hospital, Malta. This study aimed to document the demography, level of independence, cognitive function and co-morbidity of patients who were classified as SC. The population studied included all the officially registered SC at St Luke's hospital aged 60 years and over. The data was collected by means of a questionnaire that was answered by the patient, informal carers and nursing staff. The study was done over a period of one week.

Demographic data collected included: age, gender, ward where the patient was being treated, number of diseases present in the patient's medical record and length of stay from admission until deemed a SC. The level of independence was measured using the Barthel scale<sup>6</sup> (Appendix A) and the level of cognitive function was measured using the Abbreviated Mental Test score (AMT)<sup>7</sup> both taken on the day of assessment by the same assessor (PZ). The AMT was scored on 9 since the question regarding the ability to recognize two familiar persons had to be omitted due to the fact that these were not present at SLH. It has been shown that AMT scored on 9 is valid in this situation.<sup>8</sup> A copy of the AMT used is found in Appendix B.

**Figure 1:** Dependency of SC according to Barthel grouping (Barthel Index Groups)



## Results

There were 75 social cases during the study period. Three patients were under the age of 60 and so were excluded from the study. There were a total of 44 female patients (58.4%) and 31 male patients (42.6%). The presence in wards was as follows: medical wards: 60 patients (80%), surgical wards: 13 patients (17.3%), other wards: 2 patients (2.7%). The mean time to being defined as a social case was 22.49 days. The range was 1 to 290 days. The SD for dates was 36.4 days.

The mean age for a SC was 80 years. The SD was 6.7 years. The range varied between 60 and 92 years.

The mean Barthel score for a SC was 7.19. The SD was 7.44. The range varied from 0/20 to 20/20. There were 7 patients who scored 20/20 on the Barthel. On the other hand there were 21 patients who scored 0/20. The Barthel index may be classified in 4 according to the level of dependence.<sup>6</sup> These were divided from B1 signifying a higher level of independence down to B4 in whom patients with the lowest level of independence were found (Figure 1).

The mean age for B1 and B4 SC was 79.8 and 79.4 years respectively. The mean score for the AMT was 5.04 with a SD of 2.84. The range varied between 0 and 9. Ten patients

scored a maximum of 9/9. Eight patients scored a minimum 0/9 on the AMT. Those scoring 7 or more (meaning a normal cognitive state) were 27 (36%). Those scoring less than 7 were 48 (64%) in total.

When the AMT and Barthel score were assessed together it was found that there were 11 (14.7%) patients who had a high independence level in the Barthel as well as being cognitively normal on the AMT. On the other hand 36 (48%) patients were both very dependent as well as cognitively impaired.

The mean number of co-morbidities was 2.83 per SC. The SD was 1.48. Range varied between 0 and 6. 4 SC had a maximum of 6 diseases each. 2 SC were marked as not having any diseases (Figure 2).

9 (12%) SC were diagnosed as having dementia in their medical record. In this case it is important to note that low AMT scores were found in 48 SC (64%). 75% of SC with a stroke were highly dependent (B4) and had low AMT scores. 41.6% of SC with a heart problem also were highly dependent (B4) and had low AMT scores. 46.7% of SC with diabetes were highly dependent (B4) and had low AMT scores.

## Discussion

The main bias of the study was that data was not collected at the same time but over a period of one week.

Similar to other studies carried out abroad<sup>9,10</sup>, this cohort had a majority of females.

The average age for being a SC was found to be 80 with an STD of around 6.5 which is similar to other reports.<sup>9,11</sup> There is thus a tendency for the old-old to become SC.

The majority of the SC were being managed in medical wards, findings similar to another study.<sup>9</sup> The high percentage (18.7%) of total occupancy rate in medical wards is very similar to that reported in another study (20%).<sup>5</sup> Most other studies on SC were performed on medical wards only so it may be implied that SC are found mostly in these wards. This may be due to the chronic nature of the pathologies associated with SC. The five most common co-morbidities all have medical complications and so it would be expected that these patients would be admitted on medical wards. On the other hand SC in surgical wards occupy only 6.5% of the total beds.

The low Barthel scores illustrate that for the most part SC are a dependent population that need a high degree of assistance. As discussed previously, females were more dependent than males. There is slightly less dependence reported here in contrast to a study done abroad.<sup>3</sup> On the other hand it was interesting to find that 28% of these SC had a low level of dependence, whilst 10% of total were fully independent which was the same as in another study.<sup>10</sup> It is hypothesized that a comprehensive geriatric assessment and rehabilitation programme using an interdisciplinary approach may improve this cohort's level of independence and may result in a possible discharge back in the community.<sup>3,11</sup>

11 (14.7%) SC were found to be independent in Barthel as well as scoring well in the AMT. This cohort of patients may

**Figure 2:** Most common pathologies present in SC compared with prevalence of these diseases at community level<sup>13</sup>

<b>Most common pathologies found in SC (total number) - % of total</b>	<b>Prevalence of these pathologies in the elderly community</b>
1 Hypertension (31) - 41.3%	Hypertension: 35%
2 Diabetes mellitus type II (30) - 40%	Diabetes: 15%
3 Congestive cardiac failure (24) - 32%	Congestive cardiac failure :10%
4 Cerebrovascular accidents (20) - 26.6%	Cerebrovascular accidents: 4%
5 Ischaemic heart disease (19) - 25.3%	Ischaemic Heart disease: 25%

be responsive to a social care package that may help them to function safely in the community. On the other hand 48% of SC were highly dependent and scored poorly on the AMT. This cohort is the one that is likely to require institutional long-term care This finding is similar to a study done abroad.<sup>12</sup>

Regarding co-morbidity it is noted that the 5 most common pathologies are closely interrelated. Hypertension and diabetes increase the risk of cardiac failure, ischaemic heart disease and stroke. In the community elderly the prevalence of these diseases is different<sup>13</sup> and may be compared with those present in SC (Figure 2).

From this study it is clear that a diagnosis of stroke is the greatest risk factor for being a SC. The prevalence is 6 times more than in the normal population. This compares well with other studies.<sup>3,10</sup> Congestive cardiac failure and diabetes are found 3 and 2.5 times more commonly respectively, while for a high blood pressure and ischaemic heart disease the difference is minimal.

It was found that the higher the number of co-morbidities the more dependent a SC tends to be. Certain diseases cause a high degree of dependency in SC. This is especially so for SC with stroke. In this case, 3 out of 4 SC were both dependent in activities of daily living and scored poorly on the AMT. Stroke can thus be seen as a risk factor for dependency and cognitive impairment. The above results are similar to those reported in another study.<sup>14</sup>

The prevalence of a documented diagnosis of dementia was found to be 12%. Taking the mean age of a SC of 80, this is similar to that found in the community at that age which is around 10%.<sup>13</sup> But looking at AMT scores the prevalence of cognitive impairment may be as high as 64%. This means that cognitive impairment may be an important factor in increasing the risk of becoming a SC due to its negative effect on independence.

## Conclusion

SC are dependent, frail and have high levels of co-morbidities. Cognitive impairment may be an important factor in these patients. These findings illustrate that this heterogeneous cohort may have other factors involved than purely 'social' problems. A rehabilitation program using an interdisciplinary approach, ideally in a specialized unit, involving geriatricians, physiotherapists, occupational therapists and social workers may help the less dependent to return to the community.<sup>3,11,15</sup>

## Appendix A: Barthel Scale<sup>6</sup>

- Bowel
  - 0: Incontinent (or needs to be given enemas).
  - 1: Occasional accidents (once a week).
  - 2: Continent.
- Bladder
  - 0: Incontinent, or catheter inserted but unable to manage it.
  - 1: Occasional accidents (up to once per 24hrs).
  - 2: Continent (for more than seven days).
- Grooming
  - 0: Needs help with personal care: face, hair, teeth.
  - 1: Independent (implements provided).
- Toilet use
  - 0: Dependent.
  - 1: Needs some help but can do some things alone.
  - 2: Independent (on/off, wiping, dressing).
- Feeding
  - 0: Unable.
  - 1: Needs help in cutting.
  - 2: Independent (food provided within reach).
- Transfer
  - 0: Unable to get from bed to commode.
  - 1: Major help needed (physical).
  - 2: Minor help needed (verbal or physical).
  - 3: Independent.
- Dressing
  - 0: Dependent.
  - 1: Needs help but can do about half unaided.
  - 2: Independent.
- Stairs
  - 0: Unable.
  - 1: Needs help.
  - 2: Independent up and down.
- Bathing
  - 0: Dependent.
  - 1: Independent.
- Mobility
  - 0: Immobile.
  - 1: Wheelchair independent.
  - 2: Walks with the help of one person.
  - 3: Independent.

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## Appendix B: *The Abbreviated Mental Test (AMT) scored on 9<sup>7</sup>*

- 1 Age
  - 2 Time (correct to the nearest hour)
  - 3 Recall of an address at the end of the test.
  - 4 Current year.
  - 5 Name of place
  - 6 Date of birth
  - 7 Start of world war 2
  - 8 Name of present head of state
  - 9 Count from 20 to 1 backwards
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