Neuropsychology of Squalor
A/Prof Steve Macfarlane
FPOA ASM, Auckland – November 15th 2013
Two pathways into squalor….

• Compulsive Hoarding

• Passive Degeneration

• Vital to differentiate between the two due to important management implications
**SQUALOR....Hoardiing, or something different?**

<table>
<thead>
<tr>
<th>HOARDING</th>
<th>SQUALOUR</th>
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<tbody>
<tr>
<td>• The acquisition of and failure to discard possessions that appear to be useless or of limited value.</td>
<td>Active acquisition of items often absent.</td>
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<td>• Living spaces sufficiently cluttered so as to preclude activities for which those spaces were designed.</td>
<td>More a passive failure to discard.</td>
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<td>• Significant distress or impairment in functioning caused by the hoarding, resulting in the cluttering of rooms and the overall impairment of personal functioning.</td>
<td>Living spaces cluttered, but no “order” to the clutter</td>
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<td>• Historically OCD subtype, now DSM-V Hoarding Disorder</td>
<td>Distress (even awareness) often absent</td>
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<tr>
<td>• “Dry Squalor”</td>
<td>Symptom of many different conditions</td>
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<td></td>
<td>“Wet Squalor”</td>
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When does it start?

- Onset – as young as 10 years
- Mild symptoms around 17
- Moderate symptoms in mid – 20’s
- Extreme symptoms in mid – 30’s
- Presentation/help-seeking on average 50 + years
Prevalence

• Hoarding accompanies OCD in 25% to 40% of individuals diagnosed
  (Understanding Hoarding, 2005; Seedat and Stein, 2002)

• 2-3% of the general population has OCD and up to one-third of those diagnosed with OCD exhibit hoarding behavior
  (Cohen, 2004; Haggerty, 2006)
DSM-V Hoarding Disorder

- Persistent difficulty discarding or parting with possessions, regardless of their actual value
- This difficulty is due to strong urges to save items and/or distress associated with discarding.
- Symptoms result in the accumulation of a large number of possessions that fill up and clutter active living areas of the home or workplace to the extent that their intended use is no longer possible.
- The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (including maintaining a safe environment for self and others).
- Symptoms are not due to a general medical condition (e.g., brain injury, cerebrovascular disease).
- The hoarding symptoms are not restricted to the symptoms of another mental disorder (e.g., hoarding due to obsessions in Obsessive-Compulsive Disorder, decreased energy in Major Depressive Disorder, delusions in Schizophrenia or another Psychotic Disorder, cognitive deficits in Dementia, restricted interests in Autism Spectrum Disorder, food storing in Prader–Willi syndrome).
DIOGENES

• A Greek philosopher of the 4th century BC. His principles were:

“life according to nature, self-sufficiency, freedom from emotion; outspokenness, contempt for social organisation”
DIOGENES SYNDROME

- Filthy general appearance, self-neglect
- Reclusive
- Dirty, cluttered, infested houses
- Excrement, decomposing food, stench
- Showing no shame or awareness
- Past successful professional life
- Good family background/upbringing
- Reluctant to receive treatment
DIOGENES SYNDROME

• Also known as social breakdown, senile squalor syndrome, extreme self neglect.

• Term first used in 1975 by Clark and Mankikar, in Brighton UK after concluding 30 elders had the syndrome.
Squalor - Prevalence

- Up to 1/2000 community-dwelling older persons living alone
- Recent data from John Snowdon (2009) suggests as common as 1/600
- Most often seen in the acute setting
Risks

Self-neglect

Medical complications
One study in Ireland: 50% died within days of admission.
Another study reported 3 of 25 died in the first few days.

Social Isolation

Fire

0.23 % of Melbourne house fires
24% of Melbourne house fire fatalities
MFB hoarding and squalor project
Squalor - Comorbidities

- “Senile Breakdown in Standards of Personal and Environmental Cleanliness” – case series of 72 patients (BMJ 1966)
  - “>50% psychotic”
  - 28 had “psychometric evaluation” – “No instance of mental subnormality was found, and 25% of patients were of high average intelligence”

- “Diogenes syndrome” first described 1975 (30 patients)
  - “50% had a psychiatric diagnosis”
  - Implication is that 50% have NO psychiatric diagnosis…..

- Dementia
- Anorexia nervosa
- Alcohol abuse
- Bipolar
- Schizophrenia
- “End-stage” personality disorder (schizoid, paranoid)
- Depression
- Head injury
- Stroke
- Autism
- Prader-Willi syndrome
- Hoarding
Squalor - Research

- Lacking!

- Case series only, largely examining comorbidities
  - Comorbidities unclear, with use of terms such as:
    > “presenile psychosis”
    > “senile paranoid psychosis”
    > “paraphrenia” (itself an ill-defined concept)
Squalor - Research

- French series of 4 cases
  - Beauchet et al. Rev Med Interne 2002;23:122-31
    > 78-88 yrs
    > MMSE 15, 21, 23, 23
      - All had CT
      - 2/4 disproportionate frontal atrophy
    > All had SPECT
      - 3/4 bilateral frontotemporal deficits
      - 1/4 marked frontal deficit
    > All were neuropsyched
      - 4/4 frontal impairment
My own clinical impressions.....

- ~40 cases over 15 years
  - Some clearly demented
  - Those who weren’t were diagnostic dilemmas, referred “?competent”
  - Frontal impairment invariable
    > Lack of initiative, drive, insight, concern
      - Absent “disgust appreciation” Gregory et. al (6 cases)
        International Psychogeriatrics 2011Jun (23)issue 5
  - Tended to do extremely well once placed in supported care
    > i.e. Responded well to structure
Research at Caulfield.....

• “Neuropsychological profiles of people living in squalor”

• Proceeds from the assumption that

\[ \text{THIS} \]

……CANNOT be “normal”
Neuropsychological characteristics of people living in squalor

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Dr Ben Harris ⁴, Dr Brian Long ⁴,⁵, A Prof Stephen Macfarlane ¹

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² Department of Geriatric Medicine, Western Health
³ Neuropsychology, The Royal Melbourne Hospital, Melbourne Health
⁴ Neuropsychology, Kingston Centre, Monash Health
⁵ Neuropsychology, Monash Medical Centre, Monash Health
• Participating neuropsychologists from Alfred, Southern, Melbourne, Western Health

• HREC Feb 2010

• Internal funding thru research surplus

• Collated de-identified case reports

• Analysed by research geriatrician on sabbatical Feb-Aug 2013

• 69 cases analysed (in 24 of which was hoarding identified as a cause)

• Poster accepted IPA conference Seoul October 2013

• Submitted for publication “International Psychogeriatrics” September 2013
Methods

Clinicians from local health networks submitted neuropsychological reports of patients living in squalor.

Reports were screened to ensure the presence of squalor and a comprehensive examination of a set of core neuropsychological domains.

Assessments were included if basic attention, visuospatial reasoning, information processing speed, memory function and executive function were assessed.
Figure 1. Inclusion and exclusion process for submitted reports

75 reports received

Exclusions
3 reports had no neuropsychological assessment
2 reports submitted for same patient (these were consolidated)
1 report had insufficient evidence of squalor
1 report patient not co-operative with neuropsychological assessment

69 reports for analysis
# demographics

## Age

Mean = 72.29 (SD = 11.33)

## Male/Female (%)

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Male</td>
<td>47.8%</td>
</tr>
<tr>
<td>Female</td>
<td>52.2%</td>
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## Marital Status n (%)

<table>
<thead>
<tr>
<th>Status</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>24</td>
<td>34.8%</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>22</td>
<td>31.9%</td>
</tr>
<tr>
<td>Widowed</td>
<td>15</td>
<td>21.7%</td>
</tr>
<tr>
<td>Married/de facto</td>
<td>8</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

## Income n (%)

<table>
<thead>
<tr>
<th>Income Type</th>
<th>n</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Pension</td>
<td>61</td>
<td>88.4%</td>
</tr>
<tr>
<td>Self Funded</td>
<td>6</td>
<td>8.7%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

## Education n (%)

<table>
<thead>
<tr>
<th>Education Type</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>3</td>
<td>4.3%</td>
</tr>
<tr>
<td>Primary</td>
<td>20</td>
<td>29.0%</td>
</tr>
<tr>
<td>Secondary</td>
<td>33</td>
<td>47.8%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>10</td>
<td>14.5%</td>
</tr>
<tr>
<td>Not reported</td>
<td>3</td>
<td>4.3%</td>
</tr>
</tbody>
</table>
## demographics

### Living situation n (%)
- Owner: 41 (59.4%)
- Public Housing: 21 (30.4%)
- Private rental: 7 (10.1%)

### Accommodation Type n (%)
- House: 38 (55.1%)
- Flat: 25 (36.2%)
- Caravan: 3 (4.3%)
- Rooming House: 1 (1.4%)
- Missing information: 2 (2.8%)

### Has family n (%)
- No: 22 (31.9%)
- Yes: 47 (68.1%)

**If Yes, is family involved?**
- Yes: 11 (23.9%)
- No: 35 (76.1%)

### Engaged with formal services n(%) 
- Yes: 21 (30.4%)
- No: 48 (69.6%)
## Results - 1

<table>
<thead>
<tr>
<th>Domain</th>
<th>Normal (N (%))</th>
<th>Impaired (N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Processing Speed</td>
<td>8 (11.8%)</td>
<td>60 (88.2%)</td>
</tr>
<tr>
<td>Basic Concentration</td>
<td>23 (33.3%)</td>
<td>46 (66.7%)</td>
</tr>
<tr>
<td>Visuospatial reasoning</td>
<td>22 (31.9%)</td>
<td>47 (68.1%)</td>
</tr>
<tr>
<td>Communication</td>
<td>36 (52.2%)</td>
<td>33 (47.8%)</td>
</tr>
<tr>
<td>Memory Function</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New learning</td>
<td>11 (15.9%)</td>
<td>58 (84.1%)</td>
</tr>
<tr>
<td>Retrieval difficulties</td>
<td>13 (18.8%)</td>
<td>56 (81.2%)</td>
</tr>
<tr>
<td>Rapid forgetting</td>
<td>45 (65.2%)</td>
<td>24 (34.8%)</td>
</tr>
</tbody>
</table>
Mean MMSE, however, was **25.29** (SD = 3.96)
The 5 subjects with normal executive function were all compulsive hoarders.
Results – key points

69 reports included.

Mean MMSE = 25.29 (SD=3.96).

Nearly all cases (92.8%) were found to have frontal executive dysfunction. Those who weren’t were all compulsive hoarders.

Results indicated dorsolateral prefrontal rather than orbitofrontal functions were more likely to be impaired.

Vascular aetiology was the most common cause implicated by neuropsychologists.
Conclusions

Increasing evidence for frontal lobe dysfunction in cases of hoarding and squalor

Frontal executive dysfunction was a prominent finding, regardless of any underlying medical or psychiatric diagnoses.
Management implications

- CBT based therapy for OCD hoarders
  - Administrative solutions for passive degenerators

Highlights the importance of expertly performed cognitive assessments which include tests of executive function when assessing patients who live in squalor.

Role of psychiatric services?

Ethical issues – medical paternalism vs ‘rights’