Assessment of Risk of Suicide
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Scope of this lecture

- risk factors for suicide
- risk factors for deliberate self harm
- Identify suicidal patients
- Management of suicidal patients
- Economic upheaval and suicide
Definition

- Stengel (1952) suicide & attempted suicide
- Kessel (1965) deliberate self-poisoning
deliberate self-injury
- Kreitman (1977) parasuicide
- Morgan (1979) deliberate self harm
Risk factors for suicide

- Severe psychiatric illness: 6-11 times higher (Hirschfeld and Davison 1988; Garfinkel BD et al 1982)
- Dementia: 11% > 65 years yet contribute to 25% completed suicide (Margo & Finkel 1990)
- Personality disorder
- Lethality of the attempt: the more violent and painful the greater risk (Rich 1990)
Risk factors for suicide

- Depression: 15% untreated major depression died of suicide (Murphy 1983)
- Repression: aggression turn inwards (Goldberg & Sakinofsky 1988; Apter et al 1989)
- Lack of obvious message/ secondary gain
- Early loss or separation from parents (Wasserman & Cullberg 1989)
- Anxiety disorder: panic disorder (Weissman MM 1989)
Risk factors for suicide

- Accident proneness *(Black 1985)*
- Akathisia *(Drake & Ehrlich 1985)*
- Homicide: aggression and impulse control *(Virkkunen 1989; Griffith & Bell 1989; Holinger 1980; Rosenbaum 1990)*
- Criminal behaviour *(Alessi 1984)*
- Discontinuation of medication for BAD *(Schou & Weeke 1988)*
- Stress *(Kosky 1983; Cohen-Sandler 1982)*
- Epidemics *(Lessler RC 1988; Rosen & Walsh 1989; Robbins & Kulbock 1988)*
Risk factors for suicide

- Setting to avoid being found
- Low self-esteem
- Family problems (*Hawton 1982*)
- Child abuse and Hx of incest
- Spring & Fall (*Hillard 1981*)
- Widowed, divorced and separated: single is twice rate as married; MANBIS lowest rate (*Roy 1983*)
- Woman more attempt but men succeed more
- Age: >65 for men, for women, peak at 65 then drop
Risk factors for suicide

- Religion and cultural norms: low among Jews & Catholic, high among Protestants
- Creative sensitive person (*Clayton 1985; Slaby 1991*)
- Socioeconomic status: highest among the lowest and highest classes
- Severe Insomnia
- Substance abuse
- Schizophrenia
- Command hallucination & delusions
Risk factors for suicide

- Being gay when young without social support or being old
- Physical illness
- Family Hx of suicide
- Previous suicidal attempts \((\text{Goldacre} & \text{Hawton 1985; Steer 1988; Lo & Leung 1985})\)
- Living alone, contact with health care provider reduced risk
Risk factors for suicide

- Hypochondriasis
- Recent childbirth and operation
- Unemployment and financial hardship
- Education: higher among the educated
- Occupation: higher among professionals and least among artisans and farm workers
Warning ?!

Robin (1959)
- 2/3 expressed suicidal ideas
- 1/3 expressed clear suicidal intent
- often to more than one person

Barraclough (1974)
- 2/3 consulted GPs in the previous month
- 40% in the previous week
- 1/4 were psychiatric out-patients, 50% of which had seen a psychiatrist in the week before the suicide
Lo WH & Leung TM (1985)
- 40% communicated their suicidal intention to others
- 19% left a note
- 20% had previous attempts and 1/3 occurring within 6 months of their completed suicide

Shneidman (1976)
- 1/6 left a suicidal note
Suicidal note

Shneidman 1976
- ask for forgiveness
- accusing or vindictive
- drawing attention to failings in relatives or friends

Capstick 1960
- express concern for those remain alive
## Suicide following attempted suicide

<table>
<thead>
<tr>
<th></th>
<th>Suicidal attempts (No.)</th>
<th>FU (years)</th>
<th>Suicide (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kessel &amp; McCulloch (1966)</td>
<td>511</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Buglass &amp; Horton (1974)</td>
<td>2809</td>
<td>1</td>
<td>0.8</td>
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<tr>
<td>Greer &amp; Bagley (1971)</td>
<td>204</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Stengel &amp; Cook (1958)</td>
<td>210</td>
<td>2 - 5</td>
<td>1.4</td>
</tr>
<tr>
<td>Buglass &amp; McCulloch (1970)</td>
<td>511</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Hawton &amp; Fagg (1987)</td>
<td>1335</td>
<td>8</td>
<td>2.8</td>
</tr>
</tbody>
</table>

A previous attempt in past 1 year increase the risk by 100X
Risk factors (summary)

- Man >45
- single, divorced or widowed
- unemployed or retired
- living alone or lack of social support
- chronic physical illness
- severe mental illness
- alcohol and substances abuse
- recent life events e.g. loss, death of spouse, etc
- previous attempts and expressed suicidal intention
Mean annual rates of attempted suicide persons in Oxford 1980-84
Age distribution of suicidal attempts seen at Tuen Mun hospital 1993-96
Risk for attempted suicide: Demographic

- Female, 15-30
- 2/3 <35
- Female : male = 1.5-2 : 1
- male >65
- social isolation
- lower social class
- 1/3 visit GPs in the month prior to the attempt and used the prescribed drugs for the attempts (Hawton & Blackstock 1976)
Risk for attempted suicide **Precipitating**

- recent threatening life events
- quarrel with spouse, girlfriend or boyfriend
- 50% of the male attempters had employment problem
- rejection by a sexual partner
- Illness of a family member
- Physical illness
- court appearance
- recent bereavement or significant losses
- financial difficulties
Risk for attempted suicide:
Predisposing

- long term problems in marriage, children, work and health
  Bancroft 1977
  - 2/3 marital problem
  - 50% men involved in extramarital relationship
  - 1/4 men c/o wives were unfaithful
  - or the unmarried, 50% had problems with the sexual partners
Risk for attempted suicide: **Predisposing**

- Morgan 1975: 1/3 DSH men were unemployed
- Holding 1977: 50% were unemployed
- long term poor physical health
- epileptics 6x more DSH (*Hawton 1980*)
- early parental loss or parental neglected/abuse
Risk for attempted suicide:

**Psychiatric disorder**

- affective disorder
- personality disorder
- schizophrenia
- dependence on alcohol
- substances abuse
- Bancroft 1977: 50% consulted a GP, psychiatrists or social worker in the previous week
Risk for attempted suicide: Unemployment

- parasuicide and suicide are always high among the unemployed
- aggregate longitudinal analyses reveal a significant positive association between unemployment and suicide in US and some European countries but not in UK

Motivation of DSH

- Few admitted an premeditated act
- 25% wished to die
- Majority uncertain to die or not
- Leave the fate to decide
- Seeking temporary escape from intolerable situation
- Attempt to influence someone
- To punish or to induce guilt feeling to someone
- A cry for help

Bancroft 1979

Stengel & Cook 1958
Common methods used in suicidal attempt
(Tsang FK 1997)

- Overdose: 66%
- Gas: 5%
- Wrist cutting: 17%
- Hanging: 4%
- Jump from height: 3%
- Others: 5%
Drugs used in attempted suicide

- Sedative: 32%
- NSAID: 28%
- Cleaning agent: 13%
- Disinfectant: 10%
- Pesticide: 2%
- Other prescribed drugs: 10%
- Others: 5%
DSH and suicide

- Overlap between the two groups
- Kreitman (1977): 1-2% of attempters kill themselves within one year; 1/3 to 1/2 of the completed suicide had a hx of DSH
- Hawton 1985: 16-25% make further attempts within one year
- hx of previous attempts and serious acts increased further attempts
- Ovenstone 1973: attempted suicide: completed suicide = 10.8: 1
Assessment of suicide

- Risk of the suicide
- Risk of repetition
- Identify psychiatric disorder
- Clarification of current problems
- Obtain independent information from GP, relatives and friends
- Arrange help for the patients
Stages in the assessment interview

- Establishing rapport
- Understanding the attempt
- Clarification of current difficulties
- Background
- Coping
- Assessment of mental state at interview
- List of current problems
- Establishing what further help is required
- Contract
Establishing rapport

- Introduction by name
- Explanation of the purpose of the interview
- Reassurance
- Privacy and confidential
Understanding the attempt

- Detailed account of events in the 48 hours preceding the attempt
- circumstances surrounding the act:
  - degree of planning
  - isolation
  - suicide note
  - motives
  - action after attempt
  - whether alcohol was taken
Clarification of current difficulties

- Nature of problems and their duration and recent changes
- Areas to covered:
  - Psychological and physical problems
  - Relationship with partner and family, children and friends
  - Work and study
  - Consumption of alcohol and substances
Background

- Relevant family and personal history
- usual personality
- social support
- possible protective factors
Coping

- Personal resources
- social assets (friends, social agencies and GP)
- previous ways of coping with difficulties
Stages in the assessment interview

- Assessment of mental state at interview: especially mood and cognitive state
- List of current problems: formulated together with the patient
- Establishing what further help is required:
  - what the patient wants and is prepared to accepted
  - who else should be involved
- Contract: terms of further involvement of the assessor or other agencies made explicit and agreed
Disposal

- Admission to a mental hospital
- outpatient treatment
- supportive psychotherapy
- crisis intervention
- MSW, CP, GP, relatives and friends
- suicidal caution
- close observation
Psychiatric Diagnosis of suicidal attempters
(Tsang FK 1997)

- Acute stress reaction: 41%
- Anxiety disorders: 9%
- No Psychiatric Diagnosis: 11%
- Depression: 20%
- Personality problems: 4%
- Substances abuse: 5%
- Schizophrenia: 10%
- Anxiety disorders: 9%
Further disposal
(Tsang FK 1997)

Home 50%
Psychiatric Outpatient follow-up 35%
admission to mental hospital 10%
others 5%
Assessment of suicidal risk

**Beck suicidal intent scale** (1974a)

- 15 items in two groups
  - **objective circumstances related to suicide attempt**
  - **self-report**
- Each item scores 0, 1, or 2 with a total score from 0 to 30
- High score means high suicidal risk, helpful when correlated with clinical findings
Beck suicidal intent scale

Objective circumstances related to suicide attempt

1. Isolation
2. timing
3. precautions against discovery/intervention
4. acting to get help during /after the attempt
5. final acts in anticipation of death
6. active preparation
7. Suicide note
8. Overt communication of intent before
Beck suicidal intent scale

Self-report

9. Alleged purpose of the attempt
10. expectations of fatality
11. Conception of method’s lethality
12. Seriousness of attempt
13. Attitude towards living/dying
14. Conception of medical rescuability
15. Degree of premeditation
High risk factors

- Man > 45
- unemployed or retired
- separated, divorced or widowed
- living alone
- poor physical health
- received medical treatment within 6 months
- psychiatric disorder including alcoholism
- using violent methods
- presence of a suicide note
- hx of previous attempt

Tuckman & Youngman (1968)
Assessment of risk of repetition

- problems in use of alcohol
- Dx of sociopathy
- previous psychiatric treatment
- previous out-patient psychiatric treatment
- previous DSH
- not living with relatives

Buglass & Horton (1974)
Management of suicidal patients

- Suicidal caution
- Prevent successful attempts
- Motivate relatives to take up part of the prevention role
- Treat urgent situation / crisis intervention
- Consider admission for protection
- Treat underlying causes
- Management of suicidal patients in general wards
- In case of successful attempts: debriefing, mortality meeting/review
Suicide and unemployment

- **cross-sectional individual studies**: parasuicide and suicide rates among the unemployed are always considerably **higher** than among the employed.

- **aggregate-cross-sectional studies**: no evidence of a consistent association between unemployment and completed suicide, but a significant geographical association between unemployment and suicide were found.

*Stephen Platt (1984)*
Suicide and unemployment

• *individual longitudinal studies*: more unemployment, job instability and occupational problems among suicides compared to non-suicides

• *aggregate longitudinal analyses*: a significant positive association between unemployment and suicide in the U.S. and some European countries. The negative relationship in the U.K. during the 1960s and early 1970s was due to unique decline in suicide rates due to the unavailability of the most common method of suicide

*Stephen Platt (1984)*
Parasuicide and unemployment

* in 1982, the ratio of parasuicide rate among the unemployed man to that among the employed in Oxford was 15.4
* if man unemployed for more than one year, the relative risk has ranged 26 and 36.6
* highest parasuicide rates among the unemployed are found in the 30-49 age group

Hawton & Rose (1986) Oxford Study
Parasuicide and unemployment

- in 1982, the parasuicide rates for unemployed to that of the employed were 1345:114, giving a relative risk of 11.8.
- Relative risk for man unemployed for more than one year were ranged 13.5 and 20.4.
- Highest parasuicide rates among the unemployed are found in the 25-54 age group.

Platt & Kreitman (1985a) Edinburgh Study
Parasuicide and unemployment

Unemployment may exacerbate or precipitate factors known to increase the risk of suicidal behaviour, such as social and interpersonal difficulties, poverty and psychiatric disorder.

Hawton & Rose (1986) Oxford Study
Parasuicide and unemployment

- conclude that their findings are compatible with the hypothesis that unemployment is a cause of parasuicide
- parasuicide risk increases with greater duration of unemployment
- prolonged unemployment might be a significant predisposing factor in suicidal behaviour

Platt & Kreitman (1985a)
Prolonged unemployment leads to

- an increase in family tension
- arguments and violence
- more depression
- Hopelessness
- increasingly isolation from others
- changes in role structure within family
- financial hardship and material deprivation
- loss of self-esteem and self-confidence
- felling of reduced self-worth
What is the local scene?
Economy and attempted suicide

- Economic upheaval began in October 1997.
- Data on attempted suicide cases seen at Tuen Mun Hospital and Pok Oi Hospital were collected regularly.
- Statistics during the period 1 October 1996 to 30 September 1997 were compared with that during 1 October 1997 to 30 September 1998.
- Assumption: Suicidal attempts increase when there is an economic repression and high unemployment rate.
No. of suicidal attempts seen at Tuen Mun Hospital & Pok Oi Hospital from 1.10.1996 to 30.09.1997 and 1.10.1997 to 30.9.1998

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>F:M</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>1.10.1996-30.9.1997</td>
<td>366</td>
<td>156</td>
<td>2.35</td>
<td>522</td>
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<tr>
<td>1.10.1997-30.9.1998</td>
<td>409</td>
<td>242</td>
<td>1.69</td>
<td>651</td>
</tr>
<tr>
<td>% Change</td>
<td>+11.7</td>
<td>+55.8</td>
<td>-</td>
<td>+ 24.7</td>
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No. of monthly suicidal attempts seen at TMH & POH and seasonally adjusted unemployment and underemployment statistics

- Red: No. of monthly suicidal attempts seen ('0)
- Yellow: Seasonally adjusted unemployment statistics
- Green: Seasonally adjusted underemployment statistics
Age distribution of suicidal attempts seen at Tuen Mun Hospital 1993-96 (Tsang FK 1997)
Age distribution of Male suicidal attempts seen at Tuen Mun Hospital 96/97 and 97/98
Age distribution of Female suicidal attempts seen at Tuen Mun Hospital 96/97 and 97/98
Reasons for the attempts for the 96/97 and 97/98 group (in %)

- Others: 3.6% (96/97), 4.5% (97/98)
- Mental illness: 3.9% (96/97), 7.4% (97/98)
- Health: 10% (96/97), 14.1% (97/98)
- Study: 1.6% (96/97), 3.1% (97/98)
- Finance: 4.5% (96/97), 7.8% (97/98)
- Unemployment: 3.7% (96/97), 10.8% (97/98)
- Other relationship: 0.9% (96/97), 3.4% (97/98)
- Family problem: 8.1% (96/97), 12.1% (97/98)
- Boy/girl relationship: 12.7% (96/97), 27.6% (97/98)
- Marital problem: 24.6% (96/97), 33.5% (97/98)
Psychiatric diagnosis in the suicidal attempts (in %) for the 96/97 and 97/98 groups

- no psychiatric disorder: 12.2% in 96/97, 14.8% in 97/98
- others: 4.1% in 96/97, 19% in 97/98
- anxiety disorders: 1.7% in 96/97, 9.4% in 97/98
- schizophrenia: 1.7% in 96/97, 9.3% in 97/98
- depression: 16.1% in 96/97, 20% in 97/98
- adjustment disorders: 19% in 96/97, 25.8% in 97/98
- acute stress reaction: 22% in 96/97, 30% in 97/98

96/97 group (n=533) vs 97/98 group (n=651)
Summary of the attempted suicide findings for the year 96/97 and 97/98 for cases seen at TMH & POH

- No. of cases seen increase by 24.7% (n=129), yet the population increased in the district is just 6%
- The male attempts increased by 55%, with the highest increased at the 26-30 age group (58%), 31-35 age group (210%) and 36-40 age group (44%)
- The female attempts increased by 11.7%, with the highest increased at the 26-30 age group (58%), 31-35 age group (55%), 36-40 age group (25.8%) and the 41-45 age group (177%)
Summary of the attempted suicide findings for the year 96/97 and 97/98 for cases seen at TMH & POH

- The no. of overdose decreased by 13.4% yet the no. of overdosed by anxiolytics increased by 37.8% (prescribed medications)
- More cases attempted to kill themselves by more dangerous method, e.g., hanging or strangulation, gas or burning carbon, jumping from height and taking insecticide/rat killers, etc. (overall increased by 14.3%)
- Cases using dangerous methods largely belonged to the 25-45 age groups
Summary of the attempted suicide findings for the year 96/97 and 97/98 for cases seen at TMH & POH

- 14.9% used two methods or more (10% only in the 93-96 group)
- More than 20% of them took alcohol before the attempts
- 13 cases attempted to die by burning charcoal, 8 of them were men, majority of the charcoal burners were having financial difficulties
How about completed suicide?
<table>
<thead>
<tr>
<th>Country</th>
<th>1969-71 M/F</th>
<th>1986-88 M/F</th>
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<tbody>
<tr>
<td>France</td>
<td>21/8</td>
<td>36/11</td>
</tr>
<tr>
<td>Greece</td>
<td>5/2</td>
<td>6/2</td>
</tr>
<tr>
<td>Italy</td>
<td>7/3</td>
<td>10/3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8/6</td>
<td>15/9</td>
</tr>
<tr>
<td>Spain</td>
<td>5/2</td>
<td>6/2</td>
</tr>
<tr>
<td>West Germany</td>
<td>31/13</td>
<td>25/9</td>
</tr>
<tr>
<td>UK</td>
<td>11/6</td>
<td>16/5</td>
</tr>
<tr>
<td>USA</td>
<td>20/10</td>
<td>24/6</td>
</tr>
<tr>
<td><strong>Finland</strong></td>
<td><strong>49/12</strong></td>
<td><strong>59/13</strong></td>
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<tr>
<td><strong>Sweden</strong></td>
<td><strong>35/16</strong></td>
<td><strong>31/13</strong></td>
</tr>
<tr>
<td>Hong Kong</td>
<td></td>
<td>11.7/9.4(1987)</td>
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<tr>
<td>Taiwan</td>
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<td>11.1/7.3(1987)</td>
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Local suicide deaths 1980-99
(Demographic Statistics Section, HKSAR)
Local suicide deaths by sex 1980-99
Suicide rates (per 100,000)
(Paul Yip 1996)