Social contagion

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Social contagion - definition

Mass sociogenic illness
Condition that spreads within social group, but does not seem to have common organic cause

Difficult to diagnose
May be diagnosis of exclusion, once physical causes ruled out

Alternative names
Psychogenic disorders, mass hysteria (may be considered pejorative)
Features

Constellation of physical symptoms in group of people suggesting organic illness but resulting from psychological cause, each member of group experiencing one or more symptoms
Characteristics

• Absence of physical findings
• Negative laboratory tests
• Presence of hyperventilating or fainting
• Preponderance of girls or women
• Preponderance of adolescents / preadolescents
• Benign morbidity
• Rapid spread & rapid remission of symptoms
• Relapses in setting of original outbreak
Factors contributing to sociogenic illness

• Gathering of people under stress

• Common belief in physical cause or contaminant

• People seeing, hearing or hearing about other affected individuals

• Compensation issues
Mass motor hysteria

- Usually lasts for weeks or months
- Results from slowly accumulating stress to intolerable situation
- May be characterised by change in psychomotor activity eg twitching, shaking, paralysis, bizarre behaviour
Middle Ages

- 15th – 19th centuries
- Many outbreaks in nuns in convents, lasting months
- Foul language, blasphemy, lewd acts, acted like animals
- Included nun-biting
- Priests exorcised demons

Young girls forced into orders: lengthy fasting, cloistered, confined living quarters, punitive, floggings
Salem, Massachusetts, 1691-1693

- **1691** 8 girls - disordered speech, convulsive movements, bizarre conduct

- **Feb 1692** Girls accused 2 elderly women & servant from Barbados (Tibula) of being witches

- 100s residents accused of witchcraft

- Trials, torture, imprisonment, & executions

- **May 1693** Episode ended - Governor Phips ordered all suspects be released
1880s to 1920s

Industrial settings & boarding schools

- Outbreaks eg cotton mills, Swiss, German & French private schools

- Convulsions, abnormal movements, paralysis, neurological complaints, laughing fits
1980s

All-female Muslim boarding school Malaysia

- Lasted 5 years
- Crying fits, abnormal movements, fits
- Local healers summoned to exorcise demons
- 1987 ended when girls took hostage at knife-point
- Ex-PM intervened, transfer to liberal school
Mass anxiety hysteria

- Usually short duration (e.g., 1 day)
- In response to fear of false threat
- May be symptoms of nausea, fainting, difficulty breathing
Dominated by environmental concerns

Fears about

Food

Water quality

Air
- Mysterious odours
- Toxic fumes
- Radiation

Vaccinations
Frequently occurs in schools

**Early Sorrow** 1979

*And Mass Hysteria*

On May 21, 1979, a wave of illness swept through 224 primary-school children as...

**OUTBREAK OF ILLNESS IN A SCHOOL CHORUS**

*Toxic Poisoning or Mass Hysteria?*

**Epidemic Hysteria in a Zambian School:**

“The Mysterious Madness of Mwinilunga”

MANOHAR DHADPHALE and S. P. SHAikh

**Special Article**

*MASS PSYCHOGENIC ILLNESS ATTRIBUTED TO TOXIC EXPOSURE AT A HIGH SCHOOL*

TIMOTHY F. JONES, M.D., ALLEN S. CRAIG, M.D., DEBBIE HOY, R.N., ELAINE W. GUNTER, M.T., DAVID L. ASHLEY, PH.D., DANA B. BARR, PH.D., JOHN W. BROCK, PH.D., AND WILLIAM SCARFFNER, M.D.

**Abstract**

PANDEMIC hysteria, also referred to as mass...
Koro epidemics

- ‘Genital retraction syndrome’ or ‘shrinking penis’
- China, Singapore, Indonesia, Malaysia, Nigeria, Europe
- Mostly single adolescent males
- Belief or delusion that penis has retracted into abdomen despite lack of visible objective changes
- Widespread fear that genitalia will vanish
Melbourne Airport 2005

Executive Summary

1. On 21 February 2005, State and Commonwealth emergency services were involved in a multi agency response to an incident at Melbourne Airport resulting in the evacuation and closure of the southern terminal housing Virgin Blue Airlines. The incident began at around 7.10am as a medical response to a collapsed female by the Aviation Rescue and Fire Fighting (ARFF) service and concluded shortly after 6.00 pm with the reopening of the southern terminal.

2. By the end of the day 57 people had been seen by ambulance officers, 47 of whom were transported to hospital. All, but one person with an underlying medical condition were released the same day. It has been reported that

No identification of air, water or food borne transmission or biological agent
Parents urged not to panic over Gardasil

May 22, 2007 - 2:24PM

Federal Health Minister Tony Abbott has urged parents to continue vaccinating their children against cervical cancer, despite five schoolgirls being taken to hospital after being immunised.

The five students from Melbourne’s ‘Sacred Heart Girls’ College were among more than 20 who reported to the school’s sick bay on May 7 after being injected with Gardasil.

“A number of students were transported to Monash Medical Centre and two were kept overnight for observation and discharged the next day,” a spokesman for the Victorian Department of Human Services (DHS) said.

Student Natasha O’Souza said she collapsed and was left paralysed for six hours after being injected.
Death triggers mass illness

Last month the Pacific Steel factory in South Auckland and a suburb were closed but the reason for everyone feeling sick remains a mystery. SHARON COURSE reports.

MASS hysteria could be behind a mysterious illness which swept the steel plant and closed a south Auckland suburb.

Investigations into the events at Pacific Steel in Otahuhu three weeks ago have drawn a blank.

Now a chain reaction involving employees, paramedics, a police officer and a security guard - triggered by the death of a steel worker - is being considered as a cause.

Rhys Jones, general manager of parent company Fletcher Challenge Steel and Wire, described the event as like a science fiction film.

During the night shift, a steel worker in the mill felt sick and took a break.

Another worker, Murray Colthorpe (40) complained of nausea, also took a break, returned but felt funny. We don't even use chemicals in the mill. We have done everything we can to find out if there's a physical cause but have found nothing. "Those evacuated returned three hours later.

Tests for chemicals, poisons, carbon monoxide and water contamination have all come up clear.

Leaks from nearby factories was also ruled out.

An autopsy on Colthorpe revealed he died of a stroke. Tissue and blood samples have been sent to Australia for analysis. A result is expected this week.

Blood tests of people working in the mill that night have also revealed nothing. OSH ordered more tests last week.

"I think the most likely scenario is there was possibly a strong psychological reaction to the unexpected death of Murray Colthorpe," Jones said.
Parnell fume incident 1973

- **26 Jan** 50 drums merphos (organic pesticide) loaded on “Good Navigator” in Mexico bound for Sydney
- **10 Feb** Storm at sea, drums damaged & leaking (Captain knew from smell)
- **26 Feb** Ship diverted to Auckland, several drums unloaded. Wharf foreman noted sweet sickly smell, saw “merphos”. Drums in hot sun. Phone calls to Department of Health
Confused communication between scientists & emergency services

- **Merphos** low toxicity, could be washed down drain, but understood to be low.
- **Murphos 25** (parathion) highly toxic, cover with dry sand or soda ash, avoid drains.

State of emergency

27 Feb Intense media interest

Advised highly toxic, could be fatal if inhaled – neutralise with caustic soda

Adding caustic soda to Merphos made smell worse

Parnell residents affected by smell - hospital

Parnell evacuated
Firemen carrying an unconscious elderly woman from her home near the scene of the emergency in Parnell yesterday

28 February 1973
1-2 Mar Removal & burial of material
>5000 people leave homes
Decontamination with caustic soda

**Fumes Ship In Today**

After two days in isolation, the crew of the Good Navigator were given permission yesterday afternoon to bring their ship alongside Wynyard Wharf this morning for decontamination.

While others have been forced to leave their homes, which punctured the drums of chemicals, was unloaded and general manager, Mr. D. N. Merton, the civil defence organisation had advised the board that all wharves,
Civil emergency over

3 Mar Area reopened

All Clear For Most Parnell Evacuees To Go Home

A strong smell of chemical fumes still hung last night in the narrow lanes of lower Parnell as residents were permitted to

NO FURTHER REACTIONS TO FUMES

People treated at Auckland Hospital for the effects of inhaling chemical fumes during the civil emergency should not suffer any further reactions, Dr. M. Spence said yesterday.

Return Of Normal Life In Parnell

The Parnell chemical fumes should have died a natural death by this morning.

Zealand Hera
AUCKLAND, FRIDAY, MARCH 2, 1911
27 February to 4 March 1973

680 people treated in hospital

>4000 people treated in all
  - 25 wharf officers effected by fumes, 4 admitted to hospital
  - 31 fire brigade placed off duty – treated or admitted to hospital
  - 11 had caustic soda burns

>5000 people evacuated from homes for 4 days
Symptoms

• Symptoms mainly headache, nausea, vomiting, dizziness, dry mouth & throat constriction, sweating

• Symptoms associated with anxiety, fear, plus possibly use of respirators & protective clothing

• 49 people treated with atropine for organo-phosphorus poisoning, but

• Blood tests negative (no reduced cholinesterase levels)
Not effected

- Crew of ship
- Waterside Workers Union delegate who worked close to drums
- Workers who plugged up holes
- People who missed evacuation message & remained at home
- Pets left at home

BUT
Some people living up-wind effected
Commission of Inquiry & compensation

4 March 1973

Mr Kirk Promises Protection For Parnell Victims

Drums Ship Clearance Due Today

4 March 1973

April 1973

Only people with physical contact with liquid could have organo-phosphorus poisoning
– Prof McQueen
Hallmarks of social contagion

• Absence of physical findings
• Negative laboratory tests
• Apparent transmission by smell
• Typical symptoms of anxiety & panic
• Benign morbidity
• Rapid spread & rapid remission of symptoms
• Evidence of fear
Contributing factors

- Gathering of people under stress
- Belief in physical contaminant
- Smell of chemical
- People seeing, hearing or hearing about other affected individuals
- Major role of media
- Compensation issues
Include as differential diagnosis

- Consider when outbreak with these types of symptoms
- Diagnosis of exclusion
- Often not explicitly identified – media goes silent