

CHAPTER 4

DELUSIONS AND DELUSIONAL DISORDER

Delusions are false beliefs that continue to be believed despite evidence to the contrary (these beliefs are not held by the general public, or any sub-group of the community).

Delusions occur in various mental disorders - schizophrenia, bipolar disorder (manic or depressed phases), major depressive disorder, substance abuse and major neurocognitive disorders. In these disorders, delusions are accompanied by other signs and symptoms – and the combination provides the diagnosis.

Delusional disorder is the exception - in this disorder, delusions are the only symptoms present.

Until recently, delusions were thought to be absolutes – like pregnancy - the individual either had a delusion, or did not have a delusion – however, recently terms such as “sub-threshold delusions” have begun to appear in the academic literature (DeVylder, 2018).

Anorexia nervosa has not been associated with the concept of ‘delusion’ – however, Steinglass et al, (2007) found that the fear of weight gain reached delusional proportions in 20% of cases. This view is not yet fully embraced - in anorexia nervosa, terms such as ‘over valued ideas’ and ‘irrational beliefs’ tend to be used rather than ‘delusion’.

Body dysmorphic disorder is another disorder which may manifest delusions. Body dysmorphic disorder is marked by preoccupation with “one or more perceived defects in physical appearance”, which are non-existent or mild. ‘Corrective surgery’ and other medical treatments may be pursued. In DSM5 this condition is listed under Obsessive-Compulsive and Related Disorders – When the belief is held with delusional intensity the qualification “without insight” is added.

Other disorders which feature delusions are found in the following table.

Mental Disorder	Comment
Delusional Disorder	Delusions only. No other prominent additional symptoms. Usually involve some form of persecution.
Schizophrenia	Delusions may take many forms – including persecutory and bizarre. Are accompanied by at least some other symptoms such as hallucinations, problems with logical thought or self-neglect.
Bipolar Disorder (mania)	Delusions associated with undue confidence, elation and overactivity, rapid speech. Often grandiose plans to make a fortune or establish world peace.
“depression” (Major Depressive Disorder Bipolar depressed phase)	Uncommon. Delusions consistent with low mood. Contents may include terminal illness, loss of assets or unfounded guilt.

Substance Abuse Disorder	Particularly amphetamines. 13.2% of methamphetamine dependent individuals (Salo, et al, 2011). Usually persecutory.
Organic Mental Disorder	Variable presentations depending on the pathology. 10% of people with Parkinson disease (Mack et al. 2011). Half of all patients with Dementia with Lewy Bodies have delusions (Tzeng et al, 2018).

Table. Delusions can occur in a range of mental disorders. A diagnosis is only possible after consideration of the complete clinical picture.

Categories of delusions

Delusions can be categorized in various ways. The following are not mutually exclusive categories; for example, a delusion may be both bizarre and systematized.

Bizarre delusions are absurd and factually not possible. They may involve newly discovered gods or supernatural/space creatures.

Grandiose delusions are beliefs that the individual has exceptional beauty, intelligence or influence.

Persecutory (or paranoid) delusions include that the individual is being harassed, threatened, watched or bugged. They often involve spies, bikies, God, Satan or neighbours.

Delusions of reference are the belief that the everyday actions of others are premeditated and made with special reference to the patient. Commonly patients complain about being talked about on television or the radio. Patients may believe that music played or words spoken on television have been specifically chosen to identify or annoy them. People crossing the street or coughing may be interpreted as making purposeful actions, performed to indicate something to, or about, the patient.

Delusions of control involve the belief that others are controlling the patient's thoughts, feelings or actions.

Nihilistic delusions are the belief that part of the individual or the external world does not exist, or that the individual is dead (Cotard syndrome, see later). Financially comfortable individuals may believe they are destitute, in spite of bank statements to the contrary. Patients who believe they have no head or are dead, are unable to explain how that could be possible, but still hold the belief.

Somatic delusions are false beliefs about the body. These may be bizarre or non-bizarre. A bizarre example is when the individual believes his nose is made of gold. A non-bizarre example is when the individual believes he has cancer of the rectum, in spite of negative reports from a competent doctor who has examined the rectum.

Delusions of infestation/parasitosis are not uncommon in dermatological clinics (Hylwa et al, 2011).

Delusions of guilt - that the individual is guilty of purposefully or non-purposefully damaging themselves, other individuals or important property. Individuals may believe they are guilty of causing the cancer of the lady who lives next door, or a drought in Central Africa.

Delusions of jealousy - the belief that the partner is being unfaithful, and may involve checking the partner's underclothes for stains or foreign pubic hairs.

Erotic delusions (erotomania) - the belief of the patient that another person is in love with him/her (de Clerambault syndrome, see later). This (among others) may be a motivation for stalking, and lead to contact with the unwelcoming central figure of the delusion.

Systematized delusions are united by a single theme. They are often highly detailed and may remain unchanged for years.

Non-systematized delusions may change in content and level of concern, from day to day or even from minute to minute.

Chain Letter By Order of the King	PUBLIC NOTICE	Time For True Colours
--------------------------------------	----------------------	-----------------------

Please note: **If I was crazy I would have been locked up by now**
WARNING: YOU ARE GOING TO LIVE FOREVER (Z provides absolute proof)
 There is a hell of a lot to the saga but some of the more interesting points of the WAR so far include my entire body verging on combustion, my brain being physically altered to the point where it is in tune with the entire universe (but it's still me) including God, Satan and all living things, and flying fully conscious in the flesh (100% link).
 Be Aware: You are all in the hands of the gods. Magic is compulsory. Have a magic day.
 'Tis a fantastic tale vouched for by the fact that Bad Bill and his army of darkness are too scared to touch or even talk to me when I've told the whole world that they've done and where they're going is no fun but **my hands are clean**. The entire planet is coated with agents of Satan, they hate me just because I've told them the truth. Hotspur himself still tried it on occasionally but he knows he's lost. (God and Tom incorporated)...

Illustration. The above "public notice" was part of a one page document widely distributed throughout an Australian capital city by its writer. The full document is not presented because the second half made accusations against named people. The writer believed the owners of a coffee lounge were persecuting him. One night he burned the business down. He was jailed and died in prison, by suicide, days later. Prominent pathological features were the bizarre and persecutory delusional material, and that while disorder of the form of thought (loss of logical connections) made the delusion difficult to follow, it was systematized and remained relatively unchanged over time.

14.

After about six months off the injections the belief that some tragedy was imminent and pressure from other people had overtaken me. I was worried. I believed Ellen and Kerry had been backbiting. This hurt me. I went to Ellen's youth group where the Minister, Rev. Anonymous, politely called me Peter (the Apostle) and said that I belonged in prison.

Illustration. This is a passage from a “biography” written by a man who subsequently drowned himself. The injections referred to are injections of long-lasting antipsychotic medication. These “depot” medications help prevent relapse in psychotic disorders and can be given once every few weeks. After this man had ceased his injections for six months and his body was completely free of antipsychotic medication, he began to misinterpret the environment in a persecutory manner. He believed his friends had been “backbiting” and that a church leader (whose name has been replaced with “Anonymous”) said that he should be in prison. The writer’s name was not Peter, but another biblical name. It is reasonable to conclude that the clergyman used the name Peter by mistake and the patient failed to recognize the mistake, and concluded instead, that this misuse was purposeful. Another possibility is that the patient was hallucinating when he heard the name Peter and the comment that he (the patient) should be in prison.

Dear Sir,

I have sent you a data CD containing information regarding the use of implant technology by the agencies of the CIA and the SIS. Both these agencies are involved in the theft of millions of dollars from the international banking system. The implants can also be used to make there host commit suicide and have been used in the murders of many Prominent public figures, including Princess of Wales Diana Spencer, Dr David Kelly and many others. In the case of Dr David Kelly the implant was used to murder the host itself, but in the case of the Princess of Wales, Bali bombings, September 11 and the Egyptian Airlines crash the implants were used to indirectly murder people by being placed into the heads and mouths of the pilots and driver and in turn make them commit suicide.

I was implanted in Dallas Texas in 1999 and have since survived a suicide and many murder attempts. Please read the CD, it is not well set out as I have poor grammar skills but with a little perseverance you will obtain the knowledge to protect yourself and others from what I can only describe as a horror almost beyond imagination. I have set out a list of the files and it is of some importance to read them in this order to best comprehend the information.



Illustration. The two documents above, along with a CD of other documents, were mailed to many neurosurgeons and psychiatrists at leading hospitals around Australia. The writer provided full contact details and welcomed any response. He believed that an implant was placed in his head by the CIA in 1999 and it had caused him to attempt suicide. He attributed various events over the years (Deaths of Princess Diana, Dr David Kelly, and others) to the same process. These beliefs have the hallmarks of a detailed delusional system which may have been present for some years. The second letter is a response to this individual from the Australian Federal Police. He had written to them regarding his beliefs, and they responded stating they were unable to help with his complaint.

Named delusions

This section is added for completeness. Mention is made of some delusions which get quite a bit of attention in some books, because they are exotic and interesting. However, they are rare and are managed as are any other delusion. Thus, they do not warrant much space or time. They do provide a fascinating window into psychosis.

Capgras syndrome is the delusion that a person (usually a family member or someone close to the patient) has been replaced by an impostor of nearly identical appearance. This most commonly occurs in schizophrenia and organic brain disease.

de Fregoli syndrome is the delusion that a person (usually a suspected tormentor) can change into different people, and many of the people the patient meets are misidentified as transformed version of the suspected person.

Capgras and De Fregoli syndromes may be related. The issue may be whether the person who is misidentified is known or unknown to the patient.

Folie a deux (shared psychotic disorder) is diagnosed when two people share the same delusion (Shimizu et al, 2007). Usually one of these people is psychotic and the second is not psychotic; but the non-psychotic person has come to accept what the psychotic person believes. It is common for the psychotic person to have been intelligent and authoritative, and for the non-psychotic individual to be somewhat dependant. The psychotic person should be managed in the normal manner. When removed from the influence of the psychotic person, the non-psychotic individual rapidly gains “insight”.

Cotard syndrome is the nihilistic (denying the existence) syndrome. It is rare in some forms, such as, when a psychotic person believes their head has been removed. The most common form may be when people with psychotic depression believe they are dead (a way of non- existence).

de Clerambault syndrome is the delusion (usually held by a middle-aged single women, but not exclusively so, that another person (usually an important person) is in love with the patient. The ‘victim’ is usually unknown to the patient. The syndrome may lead to phone calls, unwanted letters and other attention.

A leading, charismatic surgeon [now deceased] of Hobart, Australia, was a ‘victim’. On more than one occasion the patient presented at his offices without an appointment, and disrobed in the waiting-room.

Difference between the delusions of delusional disorder and the delusions of other disorders

This section may be of interest – it is not to be learned for exams. The person with delusional disorder may believe the Tax-man (not bizarre) is after him and the story may fit together pretty well (systematized) – while the person with schizophrenia may believe a metal horse (bizarre) is after him and the story does not hang together (non-systematized)

<u>Delusional disorder</u>	<u>Other disorders</u>
not bizarre	Bizarre
Systematized	Not systematized

Charlton and McClelland (1999) observed that in delusional disorder there is fundamental mistake about the motives of others, but that thereafter, the thinking processes are logical (and will therefore be non-bizarre and systematized), while in other disorders with delusions, there is evidence of many breaks in logic.

Evolution?

The argument can be made that delusions may have some advantages – helping the individual belong to a group – ‘sub-threshold delusions’ – the tenacious adherence to a political party/belief system provides the individual with a tribe (often a very powerful, beneficial tribe) (DeVylder, 2018).

Some delusions which occur in delusional disorder can be understood in an evolutionary context. 5 categories are of interest:

- 1) belief of threat from gangs or organizations,
- 2) belief (particularly by the male) of infidelity of the spouse,
- 3) belief (particularly females) that a high status individual is in love with the individual
- 4) belief the individual suffers a life threatening disease, and
- 5) belief of an unattractive bodily/facial deformity.

These delusions can be seen to have some basis in evolution - successful evolution requires the transmission of genes, and this is better achieved if the individual lives a long life and is attractive to members of the opposite sex.

- 1) homicide by gangs (other tribes) was a major cause of mortality,
- 2) infidelity by the female spouse means the supportive male contributes to the welfare of the genes of another male,
- 3) erotomania will increase chances of passing on genes
- 4) presence of disease will reduce chances of passing on genes, and
- 5) deformity would reduce attractiveness to members of the other gender, and reduce the chances of passing on genes.

Unknown prevalence of delusional disorder

The prevalence of Delusional disorder is uncertain. People with this disorder can often function reasonably well in the community. Lacking insight, they do not believe they have a mental disorder and do not go to the doctor for help (so, difficult to count). They avoid contact with others and try to attract as little attention as possible. In large blocks of flats there are always people who have many locks on their doors, and believe the neighbours come into their residences and move or steal things during the night. Some people with delusional disorder *are* well known to the police as they make frequent calls about being persecuted. Elderly sufferers are occasionally encountered who have been crippled by their delusions for decades.

Psychology

Delusions are poorly understood and difficult to manage. Medication is helpful but does not routinely provide a certain, satisfactory result. Not surprisingly, there has been great interest in psychological factors in aetiology and treatment.

People with delusions have been found to have ‘jumping-to-conclusion’ (JTC) bias in their thinking processes – that is, they are pathologically quick to make conclusions on the basis of limited information (Andreou et al, 2018). There is also some evidence that patients with delusions have limited information processing ability (Wu et al, 2018) and are overconfident in their incorrect conclusions.

A number of psychological therapies based on the theory of JTC and other supposed problems with thinking have emerged for the treatment of delusions. The most prominent is “Metacognitive therapy” (MCT) – where “metacognition refers to thoughts about one’s own thoughts” (Dunlosky and Metcalf, 2009). MCT has been found effective in some (Moritz et al, 2016; Balzan et al 2018) but not all studies (Kuokkanen et al, 2014; Mehl et al, 2015).

Pathophysiology of delusions

Dopamine dysregulation projecting to the ventral striatum may increase the salience of irrelevant stimuli leading to delusion formation (Pankow, 2012).

Zhu et al (2016) state “The neural substrates of delusions remain unknown”. They found that patients with schizophrenia with severe delusions have relatively normal structural integrity, and that cerebral blood flow in the anterior cingulate cortex was lower in patients with severe delusions than in patients without delusions [ACC one of the most important brain regions governing cognitive control]

Joyce (2018) suggests that damage to the right lateral prefrontal cortex may lead to delusions. This region is part of a network which includes the limbic system and basal ganglia. The author raises the possibility that the mechanism for delusion formation may be similar for primary and secondary psychosis.

Wolthusen et al (2018) studied people with “subclinical delusions” and people with schizophrenia and found both demonstrated elevated perfusion of limbic structures.

Management

The management of people with delusions can be difficult. Particularly, where there are no other symptoms such as depressed mood, or hallucinations. Where there are other symptoms the patient may present and accept treatment for these other symptoms, and the delusions may be helped simultaneously. In delusional disorder where the patient has a single delusion (that he is the subject of a plot, for example), it may be very difficult or impossible to form a trusting patient-doctor relationship, and medication is likely to be refused.

Some form of patient-doctor relationship is essential for successful treatment.

Many delusions respond to adequate doses of antipsychotic medication when these can be sustained for a sufficient period (3 weeks at least; Manschreck & Khan, 2006). A trial of Metacognitive therapy may prove helpful (Balzan et al 2018). ECT is effective in treating the delusions of schizophrenia, and a combination of antipsychotic medication plus ECT is more effective than either alone (Zervas et al, 2012).

Unfortunately, symptoms of delusional disorder often reappear when therapy is ceased, and permanent medication may be required.

The prognosis for delusions becomes less favourable the longer they have been present. This is consistent with the theory that psychosis is “toxic” to the brain.

Case history

John Miller was 31 years of age and lived with his wife, Helen, and their five-year-old daughter, Julia, in a limestone brick house in the Adelaide foothills. John was a clerk at the Taxation Department in the city centre, and Helen worked part time as a hairdresser in a salon near their home.

John’s father, now deceased, had been a motor mechanic and his mother was a registered nurse; she still worked in a nursing home. John had one sibling, Kevin, who was one year younger. They were always close companions. As boys, they kicked the football in the street every night, until it was too dark to see. At school they had plenty of friends and had good relationships with their teachers, except that kicking the football left little time for homework.

In high school, John, who was already nearly six-foot tall, joined the Glenelg Surf Lifesaving Club and Kevin, who was clever with electrical gadgets, started building model airplanes and yachts.

Helen had always played excellent tennis. Her parents owned a take-away food shop and she left school to take up an apprenticeship in hairdressing.

John met Helen at the beach when he was “on duty” for the Surf Club. He was nineteen and she was seventeen years of age. He was in the first year of an Arts degree and she was halfway through her apprenticeship. John was not enthusiastic about his studies and left before the end of year exams, opting for a clerical job which would leave his evenings and weekends free of work commitments.

The couple spent time together at the beach and on the tennis court. They lived together for six months before they married. This union was precipitated by Helen becoming pregnant with Julia. They had one brief separation, but that was in the long forgotten past. Julia was not planned, but the couple was not taking preventive measures. They were pleased when marriage became “necessary”.

John achieved little promotion at work, his prospects were limited by his lack of tertiary education and ambition. He was a fitness trainer at the local football club, he kept himself fit and was an instructor in Surf Club. Julia was a healthy, articulate child. Helen had returned to work half-time when breast-feeding finished and planned to return to full-time work when the girl was well established at school.

The living grandparents were healthy, except that John’s mother was worried about her heart, perhaps because her husband had died from a sudden heart attack.

John travelled to work each day by train. Conveniently, the Taxation Department was close to an inner-city railway station. He had accepted that staff with greater ambition would gain more promotion. He shared an office with a married woman, Penny Hope, who was a few years and one public-service level senior to him. He had a good knowledge of his area of work; he had learned what he needed to know about computers and felt secure in his position.

One day Penny came back after lunch and found that John had moved his desk. Their desks had been against opposite walls. He had moved his so that it was now against a wall adjacent to hers. This wasn’t really a problem for her, but it wasn’t a good use of the space; they were now both cramped up in one half, while the other half of the room was relatively empty.

While this rearrangement didn’t particularly annoy Penny – it did happen without any discussion. But then, she had no authority or responsibility regarding the positioning of fellow workers’ desks. When she asked John about it, he was evasive and said that it was “for the best”.

Difficulties associated with this change emerged. They now had to share one pair of power points, while the power points on John’s vacated wall stood unused. Next day, to bring electricity to his computer and printer, John produced long extension cords which tangled around under Penny’s desk and then his own.

Penny thought this was an unsightly and unnecessary mess, but again, she said nothing. She had recently found John to be tense and serious. She soon found him to be quick to take offence and prepared to argue over minor details.

Any discussion they had about the taxation of multinational companies ended in an argument – even when Penny was careful.

“I know you’re not one of their people, but you help them, by defending them so much,” he once said, angrily.

Penny noticed that John was not working effectively. He began spending too much time checking his calculations, and was not getting through the required volume of work. Then he began doing his calculations with a pencil and paper. Because their tasks were inter-related, his slowness was reducing her output. For months, she tried to carry him. She hinted, she would be prepared to take over some of his tasks.

“What are you saying?” he snapped, “So, you want to get me sacked, do you?”

“Don’t be silly,” she replied and dropped the topic.

Partly out of concern for him, and partly out of concern for herself, Penny went to her superior.

“He seems to be unhappy or something. Perhaps it’s that he doesn’t like working in an office with a woman. But things have always been fine between us....I don’t like to be disloyal, but he’s not getting through his work the same....I’m afraid it’s making me look bad.... I need his figures before I can do my estimates...”

“He’s not the man he used to be,” she was told. She was surprised, saddened and relieved to hear that others had noticed a change over the last year.

As long as anyone could remember, John had bought his lunch at a sandwich shop and eaten it with the same group of men in the staff room. In the summer he had talked about cricket, and in the winter, football. During both seasons, he had tried to recruit the sons of all new employees for the Surf Club. That had changed. Now, he brought his lunch from home and ate it alone in a park.

People in other sections had begun to complain about him. In the past, when he detected inaccuracies or oversights in the work which came to him he had done the usual thing, called the authors, teased them and passed on. But, then, uncharacteristically he took one of these errors to his section head; it seemed that he could not accept an honest mistake had been made. Eventually, he said to a colleague,

“Well, if you don’t want to make waves, you must be happy with what’s going on,” walked out and left the building for an hour. It wasn’t clear what he meant. It was taken as an insult; it was an awkward situation and the section head let the matter drop.

Over the next few months things did not improve. John continued to be tense, snappy and slow. Penny didn’t want anything said to him while they were sharing an office. She finally left Taxation and went to Customs. Still, John had not acted illegally, improperly or contrary to the Public Service Act, and there were no grounds to discipline him. But they now all knew they had a problem. The Divisional Director called John to his office.

“Mr. Miller. You’ve been here for twelve years. You have been a valuable employee. But over the last couple of years, you’ve slowed down quite a bit. I understand that you don’t mix with the other staff much. I just asked you to come up to have a chat, to see if you like it here, and whether there is anything we can do to help you work things out,” he said, in a kindly manner.

“You’d better talk to my Union Representative...and my Lawyer,” said John, terminating the interview by walking out.

Thus commenced a union, legal and medical wrangle which lasted for two years. John contacted his Union Representative and stated he had been threatened with the sack, without warning or reason. This was believed and repeated by the Union Representative. John’s lawyer got involved, demanding copies of the “charges” and the “evidence”. Then John went on sick leave, his doctor claiming that he was suffering from “nervous exhaustion”, due to “industrial harassment”.

After months of discussions and letters, denials that there had been harassment and agreement that there was no hard evidence, John (possibly agitated by this turmoil) made an unexpected visit to the Consumer Protection Authority. He claimed that multinational companies were colluding to reduce their taxes. His “proof” was that, because he knew had “discovered this illegal activities”, he was being victimized and threatened with the sack. This information, which strongly suggested a delusion, was conveyed to the Union, the lawyer and his general practitioner. They all protested that a person under this much “strain” could sensibly conclude that he was being victimized. Nevertheless, they all soon agreed that it would be appropriate for John to be examined by the Government Medical Officer.

The Government Medical Officer, after two lengthy interviews, recommended that John be assessed by a psychiatrist. Initially John refused to see a psychiatrist, apparently taking the suggestion as an insult. A month later he agreed, “just to prove” there was “nothing wrong” with him. By the time the appointment arrived, John was doubting the wisdom of his “co-operation”. After the exchange of names and hand shaking, he made an apprehensive, but angry statement,

“Everybody knows that it’s easy to silence people by saying they’re mad. They do it in Russia all the time. I’m not here for that. I won’t agree to being hypnotized or anything like that. My lawyer knows I’m here. I’m here to get a clean bill of health.”

The psychiatrist was calm and respectful.

“OK, sure,” she said. “My role is simply to find out what the difficulties are.”

“Who pays for this?” John challenged, looking from the power points to the telephone and around the walls.

“The Commonwealth Government. This meeting was requested by the Government Medical Officer. But, Mr. Miller, can you tell me what you think the purpose of this meeting is, and what has led up to it?”

They sat silently looking at each other. She said nothing. He started.

He said that, three years ago people in the train had started holding newspapers up in front of their faces. He realized they were giving him the message that he was being watched. He didn't know them, but they knew him. Sometimes he would be sitting in a carriage and find himself surrounded by them. Changing carriages didn't help, there was always at least one in every carriage. He was afraid at first but then he realized they weren't going to do anything violent. They always had the business pages pointing toward him, showing rows and rows of stock market figures. They were from the multinationals. Their message was, don't rock the boat, don't increase the taxes on the multinationals.

“But with respect, you don't have much to do with government policy or deciding which companies will be prosecuted. What could you do that could hurt the multinationals?”, she asked.

He explained that if he started getting tough on them, like a snowball, it would get bigger and bigger, as it went from him to others, like compound interest, and it *would* hurt them. Make no mistake. The proof was that they had people watching him. They had already silenced half the people in the Tax Department. Once friendly work-mates “made remarks” and he had to start keeping to himself. That led to the multinationals watching him with fibre-optic devices through power points. They also bugged his office and his computer so that he had to do most of his work with pencil and paper and shred each page as he went along.

This had led to the multinationals, through mining company subsidiaries, to drill tunnels under the building, and line them with bullet-proof glass. John didn't say precisely how the tunnels fitted in with the surveillance activities. The psychiatrist didn't push him on the point. That was unnecessary, John was clearly out of touch with reality.

John had a delusional system. He believed that multinational companies believed that he was a threat to their prosperity, as his actions may force them to pay higher taxes. Supporting this central delusion were other delusions including that the multinationals were having people give him messages in the train by holding up the financial pages of the newspaper and having him watched in a variety of ways, including via fibre optic devices hidden in the power points. He also had the delusion that the multinationals had dug tunnels under his place of work. These are persecutory delusions. Such delusions often have a grandiose flavour – in this case a clerk, with relatively little influence, believed that powerful multinational companies were concerned that he could hurt them. He believed he was so important that they employed dozens of people to watch him and even went to the enormous expense of digging tunnels under the building where he worked.

This case illustrates the interesting point that people with complex delusional systems can, sometimes for years, function reasonably effectively in the community. This is possible when the delusional system is the only psychotic symptom and the delusions are limited to certain areas of life. In the case of John Miller, symptoms were most distressing when he was travelling to and from, and when he was at work. It is possible for a person with a delusional system to work through to retirement without serious work

problems, particularly when the delusions do not involve the workplace. Usually, fellow workers find such people to be tense, secretive and isolative, but also, precise (because they are cautious to protect themselves) and determined. Generally, the better the individual is able to function, the slower they come to the attention others and the later they receive offers of help.

It may be very difficult to obtain a clear understanding of the beliefs of people with persecutory delusions and to commence treatment. The nature of the condition means all attempts to discuss matters with them are interpreted as a threat or as “evidence” of a conspiracy. Believing they are being persecuted rather than sick, they “sensibly” reject the initial, and sometimes all, offers of treatment.

Helen had noticed her husband had changed. He laughed less and was often angry about the events of the day at the office. She saw this as a reaction to the additional responsibilities of fatherhood. She married John “for richer or for poorer”, and ever since they met, had known he chose to avoid stressful situations. She was glad he still had the Surf Club and the local football team to take his mind off his stress.

Helen knew nothing of John’s delusional system until after he went onto sick leave. Spending more time at home and more than usually worried, he started to talk to her about being watched at work. She thought this was a terrible way to treat an employee, and that she should go and complain to the Federal Minister for Taxation. Eventually she had contact with the family doctor, the union officials and the psychiatrist, and came to know the full story. She continued to support her husband and protested that, “He wouldn’t be like this if they didn’t keep cutting the public service work force and putting more and more stress on the few who’re left”.

John lacked insight, which means that he was unaware that what he believed was incorrect, unaware that he was suffering a mental disorder and unaware that he needed psychiatric treatment. By definition, if you come to accept that your belief is incorrect, you can no longer fully believe it, and you can no longer have a delusion. That is how it works in theory. In practice, interestingly, people can have partial insight, which means they may be able to see that their delusion is incorrect in fact, but continue to behave as though it is at least partly correct.

John’s lack of insight made it illogical for him to accept that he needed medical help. He went to the Government Medical Officer because he wanted to keep his job in the Commonwealth Government. He therefore had no alternative but to comply with that instruction. The same thing applied to the Government Medical Officer’s recommendation that he see a psychiatrist. John finally agreed to see a psychiatrist “to prove” that he was well and that his account of events was accurate. While giving such reasons, patients sometimes also have a small degree of insight, some tiny doubts about the accuracy of their thinking, and may agree to see psychiatrists to reassure themselves that they have got things right.

The psychiatrist did not get into whether or not she believed John's story. She believed he believed it. She got him to bring his wife along. The three of them talked about "the problems" John was having at work.

"Well, Mr. Miller, as you know, this is pretty much the first time Mrs Miller and I have heard about these issues. I'm sure you will understand if we ask you to explain how some of these things started to happen?"

Helen was distressed to hear the full extent of her husband's beliefs, but she was reassured by the psychiatrist's composure and supportive approach. By this stage the general practitioner had a better understanding and his name could be used. Toward the end of the interview, the psychiatrist said,

"All of us want the best for you. Worrying about all these things must be very distressing. I speak for myself and your general practitioner, Dr Chen, and I'm sure, for Mrs Miller as well. We all believe you should probably take some medicine which will help you deal with the stress you are currently under...How about that? Do you think some medicine might ease some of your distress and help you deal with things?"

The suffering which is secondary to delusions takes many forms. Fear or anxiety and insomnia are common and are a natural consequence of the belief that one is in dangerous circumstances. Some individuals waste money on items such as additional locks and security devices, new television sets and telephones, and sometimes a range of unnecessary medical or scientific tests to check for levels of poisons in their blood or water tanks, and other hard evidence. Delusions frequently lead to conflict at home and work (divorce and dismissal) irrespective of whether others are aware of the illness or not.

Certain medicines reduce delusional thinking. They also directly and immediately ease fear, anxiety and insomnia. These secondary symptoms are often the first to subside when medicine is taken, and subsequently the delusions may weaken and resolve.

John refused medication when it was first offered. He remained off work, supported by his wife and general practitioner. Helen explained the situation to his mother, who became angry and distressed. However, Helen got good support from John's brother, Kevin, and her own parents, who began to visit more often and took their granddaughter over night, every few nights. John continued to be troubled by his delusion and his continued absence from work placed a cloud over his employment.

He could not sleep and finally accepted a medication from the psychiatrist. The next day he felt more relaxed. Two weeks later he was beginning to have doubts about the multinationals digging tunnels under the Taxation Department building. A month later he no longer believed that the multinationals had been watching him through the power points. And two months later he was free of delusions, but he was more suspicious and aloof than he had been before the disorder started.

John remained on medication. He remained somewhat suspiciousness and aloofness. This may have been, at least in part, a natural awkwardness, given that he now knew that he

had behaved irrationally and that his fellow workers would also know, via office grapevine, that he had been diagnosed with a mental disorder. One option was to apply for a transfer to another Commonwealth department. But that would bring a new set of stresses, the need to learn a new job and meet new people.

“I think I would be safer where I am,” he told Helen.

She wasn't sure what he meant by “safer”, but chose not to ask. John stayed with the Taxation Department, and bought himself a car so he didn't have to travel with people with whom he was never again entirely comfortable. He remained married and continued as a good and loving father to his daughter.

John Miller suffered a paranoid delusion. Using the DSM-IV the most appropriate diagnosis was Delusional Disorder.

Reference

- Andreou C et al. fMRI correlates of jumping-to-conclusions in patients with delusions. *Neuroimage Clinical* 2018; 20: 119-127
- Balzan R, et al. Individualized metacognitive training reduces delusional symptoms in psychosis. *Schizophrenia Bulletin* 2018 DOI: 10.1093/schbul/sby152.
- Charlton B, McClelland H. Theory of mind and the delusional disorders. *Journal of Nervous and Mental Disease* 1999; 187:380-383.
- DeVylder J. Fixity of thinking and the foundations of identity: an argument for the evolutionary adaptiveness of delusions. *Early intervention in Psychiatry* 2018; DOI 10.1111/eip.12732.
- Dunlosky J, Metcalf J. *Metacognition*. Thousand Oaks, CA: Sage, 2009.
- Hylwa S, Bury J, Davis M. et al. Delusional infestation, including delusions of parasitosis: results of histologic examination of skin biopsy and patient-provided skin specimens. *Archives of Dermatology* 2011; 147: 1041-1045.
- Jolley S, Thompson C, Hurley J et al. Jumping to the wrong conclusions? An investigation of the mechanisms of reasoning errors in delusions. *Psychiatry Research* 2014; 219: 275-282.
- Joseph Z, Victor K, Rimona D. “Ego-dystonic” delusions as a predictor of dangerous behaviour. *Psychiatr. Quarterly* 2011; 82:113-120.
- Joyce E. Organic psychosis. *CNS Neurosci Ther* 2018; 24: 598-603.
- Kuokkanen R, Lappalainen R, Repo-Tihonen E, Tiihonen J. Metacognitive group training for forensic and dangerous non-forensic patients with schizophrenia: a randomized controlled feasibility trial. *Crim Behav Ment Health* 2014; [Epub ahead of print]
- Mack J, Rabins P, Anderson K, et al. Prevalence of psychotic symptoms in a Community-based Parkinson disease sample. *Am Journal Geriatric Psychiatry* 2011 May 25 [Epub ahead of print]
- Manschreck T, Khan N. Recent advances in the treatment of delusional disorder. *Canadian Journal of Psychiatry* 2006; 51:114-119.
- Mehl S, Werner D, Lincoln T. Does cognitive behaviour therapy for psychosis (CBTp) show a sustainable effect on delusions? A meta-analysis. *Front Psychol* 2015; 6: 1450.
- Moritz S, et al. Is metacognitive training for psychosis effective? *Expert Review of Neurotherapeutics* 2016; 16: 105-7.

- Pankow A, Knobel A, Voss M, et al. Neurobiological correlates of delusion: beyond the salience attribution hypothesis. *Neuropsychobiology* 2012; 66: 33-43.
- Salo R, Flower K, Kielstein A, et al. Psychiatric comorbidity in methamphetamine dependence. *Psychiatry Research* 2011; 186:356-361.
- Shimizu M, Kubota Y, Toichi M, Baba H. Folie a deux and shared psychotic delusions. *Current Psychiatry Reports* 2007; 9:200-205.
- Steinglass J, Eisen J, Attia E, Mayer L, Walsh B. Is anorexia nervosa a delusional disorder? An assessment of eating beliefs in anorexia nervosa. *Journal of Psychiatric Practice* 2007; 13:65-71.
- Tzeng R-C et al. Delusions in patients with dementia with Lewy Bodies. *Behavioural Neurology* 2018, Article ID 6707291, 8 pages
- Wolthusen R, et al. Correlation between levels of delusional beliefs and perfusion of the hippocampus and an associated network in a non-help-seeking population. *Biol Psychiatry Cogn Neurosci Neuroimaging* 2018; 3: 178-86.
- Wu C, et al. Cortical gray matter loss, augmented vulnerability to speech-on-speech masking, and delusion in people with schizophrenia. *Frontiers in Psychiatry* July 2018, vol 9, article 287.
- Zervas I, Theleritis C, Soldatos C. Using ECT in schizophrenia: a review from a clinical perspective. *World Journal of Biological Psychiatry* 2012; 13: 96-105.
- Zhu J, et al. Neural substrates underlying delusions in schizophrenia. *Scientific Reports* 2016. DOI: 10.1038/srep33857