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An independent academic psychologist, based in England, who has written extensively on different areas of psychology with an emphasis on the critical stance towards traditional ideas.

A complete listing of his writings at http://kmbpsychology.jottit.com.

CONTENTS

1. LITTLE ALBERT AND CHILDREN AS SUBJECTS

1.1. DETAILS OF STUDY

Watson and Rayner (1920) reported success in classically conditioning a fear of a white rat [1] in an eleven month-old boy called Albert B (and subsequently known as "Little Albert"). Beck et al (2009) noted: "Albert's fame now transcends the Watson and Rayner (1920) study. As much as Pavlov's dogs (appendix 1A), Skinner's pigeons, and Milgram's obedience experiments, the conditioning of Albert is the face of psychology. To many, Little Albert embodies the promise and, to some, the dangers inherent in the scientific study of behaviour" (p613) [2].

This quasi-experiment (because it lacked the rigour of a true experiment) is the basis of the Behaviourist idea that fears and phobias are learned (and can be unlearned using behaviour therapy) (table 1.1) (figure 1.1).

Harris (1979) summarised the arguments that Watson and Rayner's (1920) study was not evidence of the classical conditioning of fear:

- No evidence of lasting effect of conditioning.
- The loud noise was produced when Albert reached out to touch the rat, and this is closer to negative reinforcement (operant conditioning) than classical conditioning.
- One participant only.
- No objective measures of Albert's fear.
- No replications [3].

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[1] Less intense fear subsequently occurred in response to a rabbit, a dog, a fur coat, and a Santa Claus mask (Beck et al 2009).

[2] It is cited over 400 times in scientific journals with the most since 1970 (Field and Nightingale 2009).

[3] Earlier replications failed in conditioning fear in children, but that may have been as much due to methodological weaknesses (Field and Nightingale 2009). For example, Bregman (1934) attempted to condition 15 8-16 month-olds to fear objects like curtains. However, the infants had plenty of pre-exposure to such objects making conditioning harder, and fears without evolutionary benefits are also harder to condition (Field and Nightingale 2009).

Real life situations have shown that fears can be learned, but usually after one traumatic exposure. For example, Dollinger (1985) found that 10-13 year-old survivors of a fatal lightning strike during a children's football match had significantly more and stronger fear of thunderstorms than a control group.

Fridlund et al (2012) added another methodological flaw - the gap of nearly three months between the "baseline" and conditioning: "any changes in Albert's responses might have been due to age rather than acquired fears. Watson and Rayner's (1920) procedure confounded fear acquisition with maturation" (p318).

Table 1.1 - Main criticisms of Watson and Rayner (1920).

BEFORE CONDITIONING		
Loud noise (Unconditioned stimulus; UCS)	→	Fear (Unconditioned response; UCR)
Rat (Neutral stimulus)		No response
DURING CONDITIONING		
Loud noise + Rat	→	Fear
AFTER CONDITIONING		
Rat (Conditioned stimulus; CS)	→	Fear (Conditioned response; CR)

Figure 1.1 - Principles of classical conditioning.

Albert was seen on a limited number of occasions by the researchers - at 8 months 26 days, 11 months 3 days, 11 months 10 days, 11 months 15 days, 11 months 20 days, and 12 months 21 days of age (Beck et al 2009) [4].

Albert lived in a hospital attached to the John Hopkins University, Baltimore, USA, where his mother was a wet nurse. "Albert was a healthy, unemotional child who

[4] Beck et al (2009) used this information in Watson and Rayner (1920) to calculate that Albert was born between 2nd and 16th March 1919. Later confirmed as 9th March from gravestone. However, Reese (2010) argued that Albert may have been older because he also appears in a Watson film called "Studies Upon the Behaviour of the Human Infant" made earlier than the "Experimental Investigation of Babies" (filmed in November-December 1919 according to Beck et al 2009).

Reese (2010) also noted that the Watson and Rayner (1920) report was published in February 1920, yet the study was running in March 1920 according to Beck et al's (2009) calculation of Albert's date of birth. Beck et al (2009) resolved this conflict by arguing that the February 1920 issue of the journal was published late, but Reese (2010) found no evidence for this.

Beck et al (2010) systematically defended themselves against these and other criticisms (appendix 1B). They said: "Reliance on a single source can be problematic given the many ambiguities, inconsistencies, and contradictions in Watson's accounts of Albert's conditioning" (p301). For example, Albert was reported as weighing 21 lbs at nine months old (Watson and Rayner 1920) and at eleven months old (Watson 1924). Or Watson and Rayner (1920) said he lived "almost from birth" in the John Hopkins hospital, while Watson (1924) reported his "whole life in the hospital" (Beck et al 2010).

Powell (2011) replied: "evidence that Watson was sometimes prone to distortion does not imply that most of his facts were in error, especially in his original publications" (p107).

rarely cried. The investigators chose him for conditioning because they reasoned that such a stolid child would experience 'relatively little harm' (Watson and Rayner 1920 p2)" (Beck et al 2009 p606). The mother seems to have permitted the research, though she may not have known exactly what was involved, as records show her being paid a small amount of money for each visit to the laboratory (Beck et al 2009) [5] [6].

The first visit to the laboratory at eight months old was to establish baseline measures [7], and the conditioning took place when Albert was eleven months old. It involved seven pairings of the rat with a loud noise (table 1.2). The "experiment" was filmed by the researchers as part of the "Experimental Investigation of Babies" [8] (Beck et al 2009).

- 1. White rat suddenly taken from the basket and presented to Albert. He began to reach for rat with left hand. Just as his hand touched the animal the bar was struck immediately behind his head. The infant jumped violently and fell forward, burying his face in the mattress. He did not cry, however.

- 2. Just as the right hand touched the rat the bar was again struck. Again the infant jumped violently, fell forward and began to whimper (Watson and Rayner 1920 p4) [9].

Table 1.2 - Details of conditioning at 11 months 3 days old.

[5] One myth was that the mother did not know about the research and became outraged when she discovered, taking Albert away (Beck et al 2009).

[6] Fridlund et al (2012) felt that Albert was used in the study for practical reasons: "We have no objective data, but it seems improbable that most parents in the 1920s would have permitted curious investigators to scare their children. Douglas's mother was not just another parent. She was a wet nurse... Wet nurses were generally held in disrepute as 'fallen women' ... Watson knew that [she] was a wet nurse and may have taken her social status into account when selecting Douglas. Had Douglas been the son of more socially prominent parents (eg: a banker's child), it seems unlikely that he would have been subjected to the fear induction procedure. [Furthermore} Douglas was receiving expensive medical care that she could not afford. Although we have no specific knowledge of Douglas's case, illegitimate infants with such an illness history were frequently offered up as 'experimental material' with minimal scrutiny and few protections... Such a combination of factors would have left [his mother] ill disposed to refuse a request from Watson or a Johns Hopkins physician to experiment on her child. Voluntary consent, as we understand the term today, was not possible to give or to withhold" (pp318-319).

[7] The date of this session was established by Beck et al (2009) based on a letter by Watson dated December 5th 1919 about purchasing film materials. They say that the letter was dictated to his secretary earlier, and thus the baseline session took place between 28th November and 12th December 1919. Powell (2011) argued that letter was dictated at the time it was dated, and the baseline session was after December 7th 1919, if not well into 1920.

[8] Extracts on YouTube.

[9] "To all intents and purposes, Albert had been trained into a full-scale phobia" (Hayes 1994 p306).

1.2. FINDING ALBERT

The researchers did not decondition the fear of the rat before Albert moved away from the John Hopkins University [10]. The question thus arises, what happened to Little Albert?.

Beck et al (2009) described the search for Albert over a number of years using historical documents including what remains of Watson's own materials [11]. They believed "Little Albert" was Douglas Merritte (who died in 1925, aged 6 years old, probably from meningitis) [12] [13]. The accuracy of this identification depends on whether Albert B was the real name of the child. Beck et al (2009) argued that, despite little concern for confidentiality at the time, the name Albert B seems like an invention of Watson who liked to play with words (eg: child AB) [14].

"We will probably never know if Douglas experienced any long-term effects from Watson and Rayner's (1920) attempts to condition him. No family stories suggest that Douglas was afraid of furry objects or loud noises. Of course, a lack of evidence does not necessarily mean that the conditioning procedure had no ill effects or that Douglas's treatment was ethical" (Beck et al 2009 p613).

Subsequently, Fridlund et al (2012) found Douglas's medical records which suggested that he was not the healthy child claimed by Watson and Rayner (1920). "Further inquiries found ample sources of information available to Watson that would have made him aware of Douglas/Albert's medical condition at the times he tested the baby" (Fridlund et al 2012 p302).

Fridlund et al (2012) also studied the four minutes of the "Experimental Investigation of Babies" which showed Albert, and concluded: "Albert's temperament and behaviour are not within the normal range for his age, and the abnormalities observed on film cannot solely be attributed to the hospital environment or the physical context of filming. Numerous diagnoses suggest

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[10] "For reasons of morality, decency and respect for human rights, only certain types of research, conducted in certain ways are nowadays considered to be acceptable practice" (George et al 2006 p12). "Research ethics" exist today, and these are professional codes of practice for research by psychologists. These apply to all participants in research, but extra concerns are associated with children as a vulnerable group in relation to research.

[11] Watson burned many of his papers in later life saying "when you're dead, you're all dead" (quoted in Buckley 1989).

[12] Another myth was that Albert lived all his life as an adult terrified of white rats and furry objects.

[13] Cornwell and Hobbs (1976) outlined many mistakes and myths in how "Little Albert" has been reported in psychology textbooks (eg: 60% of 76 "general psychology" books have at least one distortion).

[14] Powell (2010) suggested a child of another wet nurse with the surname Barger, and thus Albert B was his real name.

themselves, including mental retardation, an autism spectrum disorder, or another pervasive developmental disorder. Differential diagnosis from Albert's on-film behaviour is impossible posthumously, since it would require specialised behavioural, genetic, and/or neuropsychological testing..." (p308). There was also evidence of visual impairment.

Furthermore, Alan Fridlund said: "If a child such as Albert came to my professional attention, I would refer him to a paediatric neurologist to rule out any acute systemic illness or neuropathology that might account for his unresponsiveness. A host of congenital, chronic neurodegenerative diseases can masquerade as developmental syndromes and would need ongoing medical management. More critically, acute conditions like infectious, metabolic, or toxic encephalopathies could produce behaviour like Albert's, are sometimes reversible, and would require immediate medical attention" (Fridlund et al 2012 p309).

Fridlund et al (2012) asked the question, why did Watson and Rayner say that Albert was "healthy" and "normal"? The question-posers answered in this way: "Although we cannot know Watson's exact motivations, we can identify several benefits he gained in presenting Albert as a healthy child. Certifying Albert's excellent development and phlegmatic disposition shielded Watson from charges of maltreatment of children... [15] Although the American Psychological Association... did not pass a formal code of ethics until 1953, Watson recognised that inducing fear in infants was controversial... Proffering Albert's emotional stability assured readers that he would suffer 'relatively little harm' (Watson and Rayner 1920 p2) and deflected possible criticism from the investigators and Johns Hopkins University. Albert also needed to be 'healthy' and 'normal' for Watson to advance his aim of establishing general laws of learning" (Fridlund et al 2012 p320) [16].

Fridlund et al (2012) go further: "To make the argument that Watson did not know he was inducing fear in

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[15] Watson (1928) defended himself against charges of mistreatment of participants generally: "You may think that such experiments are cruel, but they are not cruel if they help us to understand the fear life [sic] of the millions of people around us and give us practical help in bringing up our children more nearly free from fears than we ourselves have been brought up. They will be worth all they cost if through them we can find a method which will help us remove fear.(p. 54)" (quoted in Fridlund et al 2012 p321).

[16] Watson believed that the principles of conditioning were the basis for making a better society. He said: "give me a dozen healthy infants well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select — doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors" (Watson 1930 quoted in Fridlund et al 2012 p321).

a neurologically impaired baby, it is necessary to contend that (a) the correlation between Douglas's health and the test sessions is happenstance, (b) Watson did not bother to check the medical files, (c) no one told Watson that Albert was chronically ill and had several serious acute episodes, and (d) Watson failed to notice abnormalities in the infant he tested repeatedly. The evidence is circumstantial, but the data strongly support the premise that Watson knowingly misrepresented Albert's medical condition" (p319) [17].

1.3. AFTER OR WITHOUT ALBERT

As Watson and Rayner (1920) tried to induce a fear through conditioning, soon afterwards and strongly influenced by that work, Mary Cover Jones (1924) used the same principles to reduce a fear (counter-conditioning). This is known in textbooks as the case of "Little Peter" (in keeping with "Little Albert"). Jones (1924) observed: "About three years later this case, which seemed almost to be Albert grown a bit older, was discovered in our laboratory... it possible for the experiment to continue where Dr Watson had left off".

Peter was 2 years 10 months old at the beginning of the study with a fear of white rats which had extended to rabbits, fur coats, feathers, and cotton wool. In fact, the fear of rabbits was found to be strongest.

The fear was reduced by allowing Peter and three friends to play with their toys together, or Peter was given food which he liked, and a rabbit was introduced each time in closer proximity (table 1.3). This process took a number of months, and is the basis to therapy known as systematic desensitisation (Wolpe 1961) [18].

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[17] Prior to codes of conduct for researchers, institutionalised children (ie: orphans, mentally or physically disabled) were seen as "ideal" subjects of study under controlled conditions. The promise of future treatments and cures was used to justify studies that would now be viewed as unethical. As one acclaimed US doctor in the 1920s said: "Well, all I can say is, it's against the law to do many things, but the law winks when a reputable man wants to do a scientific experiment... Unless the law winks occasionally, you have no progress in medicine" (Thomas Rivers quoted in Fridlund et al 2012 p321).

"For more than a century, critics of medical research have called attention to the fact that children and other vulnerable populations - pregnant women, prisoners, the mentally ill - have too often served as unwitting and unwilling subjects of medical experiments" (Lederer 2003 p1). Famous historical examples include Edward Jenner giving a 8 year-old boy (without his or his mother's knowledge) the forerunner to a vaccine against smallpox in 1796, and Louis Pasteur's testing of a rabies vaccine on a ten year-old in 1885. These are examples from medical research rather than psychology, but they show the attitude towards children even up to the mid-twentieth century.

With the trial of 23 Nazi doctors after the Second World War, attitudes changed and the Nuremberg Code was developed, which excluded children from medical research because they could not give informed consent to participate (Lederer 2003). This is the basis of research ethics in all subjects.

[18] Wolpe (1952) gave cats a mild electric shock after an auditory cue while in an experimental chamber. He found that the cats were afraid of the noise and the chamber. Thus feeding them in

A. Rabbit anywhere in the room in a cage causes fear reaction.
B. Rabbit 12 feet away in cage tolerated.
C. Rabbit 4 feet away in cage tolerated.
D. Rabbit 3 feet away in cage tolerated.
E. Rabbit close in cage tolerated.
F. Rabbit free in room tolerated.
G. Rabbit touched when experimenter holds it.
H. Rabbit touched when free in room.
I. Rabbit defied by spitting at it, throwing things at it, imitating it.
J. Rabbit allowed on tray in high chair.
K. Squats in defenceless position beside rabbit.
L. Helps experimenter to carry rabbit to its cage.
M. Holds rabbit on lap.
N. Stays alone in room with rabbit.
O. Allows rabbit in play pen with him.
P. Fondles rabbit affectionately.
Q. Lets rabbit nibble his fingers (Jones 1924 pp310-311).

Table 1.3 - Appearance of rabbit and Peter's reaction.

At each stage the individual learns through classical conditioning a positive association with the feared object which becomes stronger than the negative association (fear) (figure 1.2).

BEFORE CONDITIONING

Rabbit (Unconditioned stimulus; UCS)	→	Fear (Unconditioned response; UCR)
Food or play	→	Positive response

DURING CONDITIONING

Food or play + rabbit	→	Positive response

AFTER CONDITIONING

Rabbit (Conditioned stimulus; CS)	→	Positive response (or no fear) (Conditioned response; CR)

Figure 1.2 - Principles of classical conditioning and reducing a fear.

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experimental chamber was only partly successful in removing the overall fear. By systematic desensitisation for both the chamber and the noise, the anxiety in response to the sound and the chamber were removed.

The case study of Peter is not such a good example of classical conditioning to remove fears as often quoted because:

a) The children with Peter played with the rabbit (eg: Lawrence "ran over and looked in the cage... Peter followed close and watched"). The reduction of fear may have been due to observational learning and modelling (ie: watching others playing with feared object reduces fear in observer).

b) Jones (1924) admitted that the fear of white rats was probably not learned through classical conditioning. She hints at a non-Behaviourist explanation for its development - talking about Peter's mother: "In an attempt to control Peter she resorts to frequent fear suggestions. 'Come in Peter, someone wants to steal you'" (p315).

Field and Nightingale (2009) wanted to show the positive contribution of Watson and Raynor's (1920) work for the treatment of anxiety by imagining a parallel universe where Albert had escaped from the hospital and was never tested. They said: "Some would argue that this parallel universe is no different to our own. These critics would suggest that such were the limitations of Watson and Rayner's study, that their conclusions have had little impact on the psychological world. They might point out that the study used only one child, the procedural details were poorly reported, the conclusions were too subjective, the technology did not exist to allow reliable measurement of emotional responses, and that the stimuli used... were inadequate to investigate generalisation effects... Therefore, if Albert had escaped, the world would be no different because the methodological flaws in the study mean that it has had little impact on psychology anyway" (pp314-315).

But for Field and Nightingale (2009) their parallel universe would be without conditioning-based treatments like systematic desensitisation and exposure therapy, which have proved to be effective for different anxiety disorders, and psychoanalysis would be the dominant treatment. "If Watson were alive today he might well sum up the parallel universe where Albert escaped as being a world that contained countless people who are needlessly debilitated by their anxiety and who are paying extravagant fees to therapists to discuss their relationships with their mothers!" (Field and Nightingale 2009 p317).

1.4. APPENDIX 1A - IVAN PAVLOV AND CLASSICAL CONDITIONING

Ivan Pavlov was the pioneer in studying classical conditioning in the famous experiments with dogs and bells [19]. His collaborators developed the work during the early part of the 20th century. For example, Shenger-Krestinikova (1921 cited in Pavlov 1927) classically conditioned dogs to salivate in anticipation of food in response to a cardboard circle but not an ellipse. But when the discrimination between the two cardboard shapes became too difficult (eg: food associated with a circle, but not with nine-tenths of a circle), the dogs became distressed. Pavlov (1927) reported: "The hitherto quiet dog began to squeal in its stand, kept wriggling about, tore off with its teeth the apparatus for mechanical stimulation of the skin, and bit through the tubes connecting the animal's room with the observer, a behaviour which never happened before. On being taken into the experimental room the dog now barked violently, which was also contrary to its usual custom; in short it presented all the symptoms of a condition of acute neurosis" (quoted in Laborda et al 2012 p47).

Krasnogorsky (1925) found a similar reaction in a six year-old child. The child was taught to associate the arrival of food with the speed of a metronome (beats per minute; bpm). He could learn that food was associated with 92 bpm, but not 144 bpm, say, but became distressed if the distinction was too close (eg: 132 and 144 bpm). Krasnogorsky (1925) observed "an important change in the behaviour of the child, having always been easy to deal with and quiet during the experiments, he now became irritable and refused to go to the laboratory" (quoted in Laborda et al 2012 p47).

These examples of "experimental neurosis" seemed to occur when the environment became unpredictable and uncontrollable (Mineka and Kihlstrom 1978).

The basic principles of classical conditioning have been challenged since Pavlov by findings that the process is more complex, and influenced by, for example (Laborda

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[19] Laborda et al (2012) argued that "the use of animals in psychological research is not only necessary, but essential for the development of the discipline as a whole and for the clinical science in particular" (p55).

Domjan (2010) proposed five advantages of using non-human animals over humans in research of psychopathology:

i) Better control over genes (eg: selective breeding).

ii) Better control over past experiences.

iii) Able to explore how a condition develops by creating it from the start.

iv) Animals do not show confounders like "demand characteristics".

v) Animal behaviour "is not complicated by complicated by complex linguistic processes" (Laborda et al 2012).

et al 2012):

- The role of cognition in mediating the association in classical conditioning.
- Some behaviours (with an evolutionary basis) are easier to condition than others, and harder to decondition.

1.5. APPENDIX 1B - ALBERT IS DOUGLAS: THE DEBATE

Evidence used by Beck et al (2009)	Criticisms
Few wet nurses at John Hopkins Hospital at the time were non-Black, so there is a limited choice of White babies born at the right time using census records.	* Other non-Black candidates (Powell 2010). * Albert not born at hospital (Powell 2010).
Albert was not adopted and stayed with his mother until death - thus information on gravestone.	* Watson later said Albert have been adopted and taken away, and that is why deconditioning of the fear was not possible (Powell 2010).
Filming of the "Experimental Investigation of Babies" began in November-December 1919 (based on letter of Watson's dated 5th December 1919).	* Earlier film (Reese 2010). * Albert appears in film dressed lightly (suggesting warm weather) when it is meant to be December (Reese 2010).
Biometric comparison of Albert's facial features in "Experimental Investigation of Babies" and photograph of Douglas.	* Quality of film poor and such facial measurements difficult (Powell 2010).
Late publication of February 1920 issue of "Journal of Experimental Psychology".	* No evidence (Reese 2010).

Table 1.4 - Arguments for and against Albert being Douglas Merritte.

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2. OLDER ADULTS AND ANXIETY DISORDERS

2.1. INTRODUCTION

Anxiety disorders among older adults may be as high as one in six people, or one in four if wider criteria (sub-threshold definitions) are used (Oude Voshaar 2013). Anxiety disorders are associated with poorer physical health (eg: increased risk of cardiovascular disease) and lower quality of life, and if untreated can lead to major depression (Oude Voshaar 2013).

Despite advances in understanding and treating such disorders, older adults are not receiving the appropriate treatment (eg: only 10% of over 55s in a Dutch study; De Beurs et al 1999). This may be due to ageism, at least in part. "Physicians, therapists, older patients as well as next of kin, often interpret anxiety symptoms and avoidance behaviour in later life as normal and more or less acceptable, when in reality the patient may have a psychiatric disorder" (Oude Voshaar 2013 p8).

2.2. EFFECTIVE TREATMENT

Studies of the effectiveness of treatment for older adults often have certain limitations (Oude Voshaar 2013):

- A focus on anxiety symptoms rather than anxiety disorders.
- Relatively small samples.
- Problems in defining "older adults".

However, anti-depressants appear to be more effective than cognitive-behavioural treatment (CBT) for older adults for anxiety disorders. Or put another way, CBT is less effective for older than younger adults.

Wetherall et al (2013) compared the effectiveness of treatment for under 60s and over 60s involved in the Co-ordinated Anxiety Learning and Management (CALM) study.

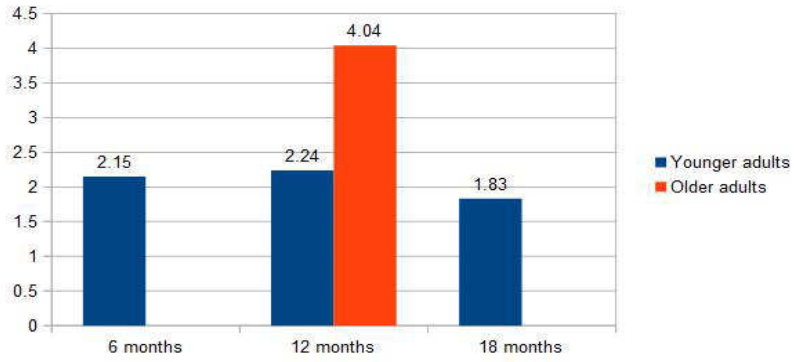
Individuals with DSM-IV panic disorder (appendix 2A), generalised anxiety disorder (GAD) [20], post-traumatic

[20] Coplan et al (2012) found that intelligence (as measured by the Wechsler abbreviated scale of

stress disorder (PTSD), and social anxiety disorder (SAD) from seventeen clinics in four places in the USA were recruited [21]. In total, this was 1004 participants aged 81-75 years old, who were randomised into collaborative care or usual care. The collaborative care allowed the participants to choose medication, CBT, or both with the help of anxiety clinical specialists (ACS) [22].

Measures on a number of psychometric questionnaires (eg: Brief Symptom Inventory; BSI; Derogatis 1993) were taken at baseline (before treatment assignment), and then by telephone by interviewers blind to the treatment condition at 6, 12, and 18 months. "Treatment response" was defined as a 50% reduction in scores relative to baseline. For analysis purposes, two groups were used - 18-59 years old (n = 870) and 60-75 years old (n = 134).

Among the younger adults, the collaborative care produced significantly more participants showing treatment response than with usual care at 6, 12, and 18 months, but older adults only showed this difference at 12 months (figure 2.1). Collaborative care was beneficial for those with GAD, panic disorder, and SAD among the young adults, but only SAD and PTSD for the older adults.



(Data from Wetherell et al 2013 table 3 p68)

Figure 2.1 - Significant odds ratios for treatment response of collaborative versus usual care.

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intelligence; WASI) positively correlated with anxiety (as measured by the Penn State Worry Questionnaire; PSWQ; Behar et al 2003) among sufferers of GAD ($r = 0.46$; $p = 0.016$), but negatively correlated for healthy participants ($r = -0.60$; $p = 0.009$). This study compared eighteen controls with 26 GAD sufferers in the USA. The difference in relationship may be due to lower choline and related compounds in the white matter (myelinated axons) in the brains of GAD sufferers (Coplan et al 2012).

[21] Obsessive-compulsive disorder (OCD) was not included as the treatment regimen is more complex (Sullivan et al 2007).

[22] Of the older adults, 6.6% chose medication, 34.4% CBT, and 59% both. Younger adults divided into 8.8% medication, 32.8% CBT, both 53.6%, and neither 4.8%.

"Overall, these findings are consistent with those of other investigations suggesting that medications and CBT for anxiety disorders may not be as effective for older individuals as they are for younger people" (Wetherell et al 2013 p69).

Table 2.1 summarises the main strengths and weaknesses of the Wetherell et al (2013) study.

Strengths

1. First study to compare collaborative care for anxiety disorders among younger and older adults. Previous studies tended to be meta-analyses that compared different studies.

2. Inclusion based on DSM-IV diagnostic criteria as determined by trained interviewers.

3. Concentrated on four types of anxiety disorder (and not the more complex to treat OCD).

4. Interviewers blind to participants' treatment condition.

5. Use of psychometric questionnaires with establish reliability and validity.

6. Sample typical of sufferers of anxiety disorders, and thus findings are generalisable to all US sufferers, at least.

7. The ACSs were trained in delivering the treatment as well as a computer-aided programme for the CBT.

8. Clear definition of "treatment response" (operationalised).

9. Two groups had similar profiles (eg: gender, ethnicity, anxiety disorders, and baseline measures).

10. Written informed consent obtained from participants after the study had been explained to them.

11. Attrition rate (ie: drop-out) similar for both groups - 20.9% (younger) and 14.2% (older) at 18 months.

12. A purposive sample of clinics based on factors like patient population, ethnic mix, and income levels. For example, one clinic in San Diego was included because it serves primarily Spanish-speaking patients (Sullivan et al 2007).

Weaknesses

1. The collaborative care was provided by primary care healthcare workers with limited experience of mental health services.

2. The CBT consisted on only 6-8 weekly sessions.

3. The sample was individuals presenting for treatment.

4. No assessment of cognitive impairment, which could have affected the response to CBT.

5. It was an effectiveness study, which assessed the treatment in real-world settings, and lacked the control of an efficacy study carried out in research settings (eg: videotaping therapy sessions).

6. Usual care as the control did include some treatment and was not the same as a control using a waiting list (no treatment), say. No restrictions were placed of the usual care provided by the clinic (Sullivan et al 2007).

7. The sample of older adults was relatively small, and excluded over 75s.

8. Why was the cut-off at 60 years old for older adults? Some studies use 50 or 55 years old.

9. Seventeen different sites means the possibility of variations in treatment/procedure.

10. The questionnaires were self-rating (ie: no objective measure of improvement).

11. Some differences between the two groups (eg: less older adults with SAD and panic disorder).

12. The participants were not blinded (ie: they knew which group in), and thus the possibility of expectation effects.

Table 2.1 - Strengths and weaknesses of Wetherell et al (2013).

2.3. APPENDIX 2A - PANIC DISORDER

Panic disorder is characterised by recurrent, unexpected panic attacks, and subsequent fear of future attacks. Up to 2.5% of adults will suffer in one year, but this decreases with age (eg: around 1% of over 55s in the Netherlands) (Corna et al 2007).

Using extensive data from Canada, Corna et al (2007) found an overall 12-month prevalence of 0.82% and a lifetime prevalence of 2.45%. But one-fifth (23%) of sufferers had their first panic attack after 55 years old.

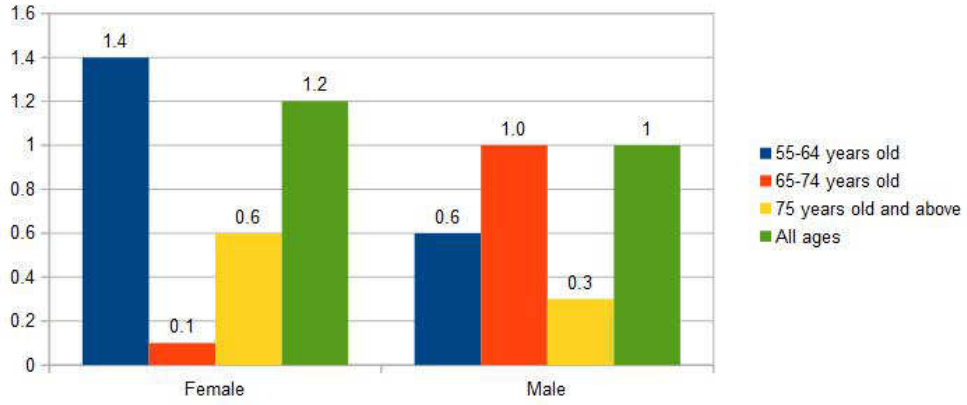
The researchers used data from the Canadian Community Health Survey - Mental Health and Well-Being (CCHS 1.2) which interviewed a national representative sample of 12 792 over 54 year olds in 2002. DSM-IV criteria were used for diagnosis by trained lay interviewers.

The 12-month prevalence was 1.3% for respondents aged 55-64 years old, 0.32% for 65-74, and 0.50% for 75 years old and above. This compares to 0.8%, 1.7% and 0.5% respectively in a Dutch study using DSM-III criteria (Beekman et al 1998).

There was a significantly lower risk of suffering from panic disorder for widowed individuals, but a significantly greater risk for those with low incomes, physical health limitations, or other psychiatric

disorders.

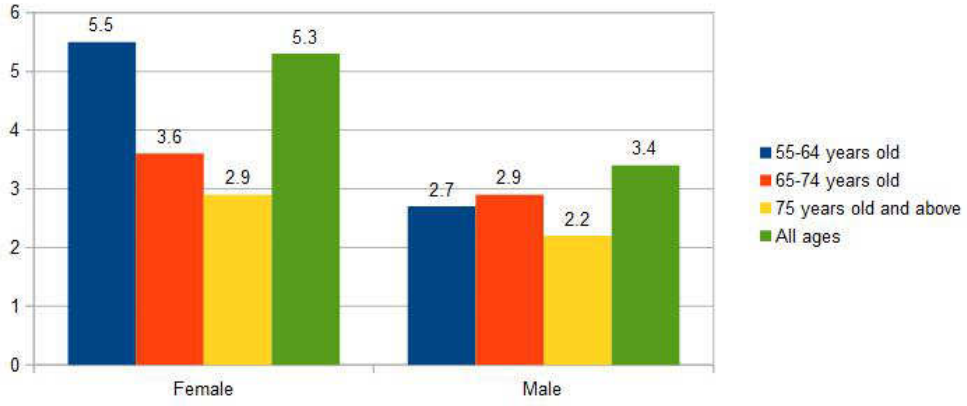
In an equivalent study in England (the 3rd Adult Psychiatric Morbidity Survey 2007), 1.1% of all adults were diagnosed with symptoms of panic disorder in the past week using ICD-10 criteria, but only 1.0% of 55-64 year-olds, 0.5% of 65-74 and 75 year-olds and above (Deverell and King 2009). There were gender differences (figure 2.2).



(Data from Deverell and King 2009 table 2.3 p40)

Figure 2.2 - Percentages of older men and women with panic disorder in past week.

There were also gender differences among older adults in generalised anxiety disorder in past week (Deverell and King 2009) (figure 2.3).



(Data from Deverell and King 2009 table 2.3 p40)

Figure 2.3 - Percentages of older men and women with generalised anxiety disorder in past week.

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