

Evidence based therapy for children and young people

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Overview

- Focus on childhood anxiety and depression
- Provide an overview of the effectiveness of treatment and prevention programmes
- Adopt a critical stance to highlight key issues for discussion

Key Messages

- Improving child mental health is an important public health objective
- The evidence base for effective child mental health interventions is growing but is still limited
- **CBT is the best evaluated psychological therapy and has good evidence of efficacy**
- But.....recent comparative studies conducted in everyday clinics demonstrate lower effect sizes

Anxiety

- Point Prevalence: 2-4% children fulfil diagnostic criteria for an anxiety disorder (Costello et al, 2003; Meltzer et al, 2003).
- Lifetime rates: Approx 10% experience a significant anxiety disorder by age of 16 (Costello et al, 2003)
- If omit impairment criteria rates approx 20% of children suffer with significant anxiety (Costello et al 1996: Essau, Conradt & Petermann 2000)

Long term Course

- 776 children aged 9-18 who received psychiatric assessments were followed up two and nine years later (Pine et al, 1998).
- Strong association between adolescent anxiety and the presence of anxiety 2 & 9 yrs later.
- Anxiety and depressive disorders in adolescence led to a two to threefold increase in the risk of these disorders in young adulthood

Long term Course

- Children assessed at various times during childhood and into young adulthood (Kim-Cohen et al, 2003).
- **At age 21, 80.5%** of those with a diagnosed anxiety disorder had received a prior diagnosis before the age of 18.
- **At age 26, 76.6%** of those with an anxiety disorder had received a prior diagnosis before the age of 18.

Wider impact

- 1265 children assessed for anxiety disorders between 14-16 and then on a range of measures of mental health, educational and social functioning between the ages of 16-21 (Woodward & Fergusson, 2001).
- Significant associations between anxiety in adolescence and anxiety, depression, illicit drug dependence and educational underachievement in young adulthood.

Childhood anxiety persists and increases the risk of other disorders in young adulthood

Depression

- Point Prevalence: Approx 1.4% amongst 11-16 year olds (Green et al 2005)
- Annual rate: up to 2.8% of children and 8.3% of adolescents will suffer from a major depressive disorder (Birhamer et al 1996; Costello et al 2006).
- Cumulative rates: up to 20% will suffer at least one clinically depressive episode by the age of 18 (Birhamer et al 1996).

Depression

- Most young people with depression will show initial remission
 - 10% within 3 months
 - Further 40% within first year
 - Further 40% next year (Harrington & Dubicka 2001)
- Up to **70% will have a further depressive** episode within 5 years (Lewinsohn et al 2000, Fombonne 2001)

Wider Impact

- Depression affects schooling, educational attainment, relationships and increases the risk of suicide and depression in adulthood (Harrington et al 1997; Weissman et al 1999; Kerfoot et al 1999; Thapar et al 2010).
- “Sub-threshold” depressive symptoms confer a similar risk of suicide and depression in adulthood (Ferguson et al, 2005)

Childhood depression persists, relapse is common and results in significant immediate and long term morbidity

Interventions

RCTs have shown CBT to be effective for a range of child emotional problems including :

- OCD (Barrett et al 2004)
- Depression (Lewinsohn & Clark 1999)
- Generalised Anxiety (Kendall et al 1997)
- Specific phobias (Silverman et al 1999)
- Social phobia (Spence et al 2000)
- School refusal (King et al 1998)
- Sexual abuse/Trauma (Cohen et al 2004)
- Chronic fatigue (Stulemeijer et al 2005)

Meta-analyses & Cochrane Reviews

CBT is effective for:

- Anxiety
Cartwright-Hatton, Roberts, Chitsabesan, Fothergill & Harrington, 2004;
James, Soler & Weatherall, 2009
- Depression
Compton et al 2004; Wantanabe et al 2007; Klein et al 2007
- Traumatic Stress
Taylor & Chemtob, 2004; Stallard, 2007
- OCD
O'Kearney, Anstey & von Sanden 2007

NICE

NICE have undertaken a number of reviews of the treatment of child mental health problems

- Eating disorders
- Depression
- OCD
- PTSD
- Chronic Fatigue
- ADHD
- Conduct disorders

NICE: Depression (2005)

“Children and young people with moderate to severe depression should be offered, as a first line treatment, a **specific psychological intervention (individual cognitive behaviour therapy (CBT)**, interpersonal therapy or short-term family therapy; it is suggested that this should be of at least 3 months’ duration”.

Recent researchTADS

March et al, (2007)

- Adolescents with mild to severe depression randomised to Fluoxetine (n=109); 14 session CBT (n=111); Combined Fluoxetine + CBT (n=107) or Placebo Pill (n=112).
- 12 week follow-up rates of response (assessed by CDRS-R) were COMB (71%); FLX (61%); **CBT (43%)**, Placebo (35%)
- 36 weeks: COMB (86%); FLX (81%); **CBT (81%)**
- Suicidal ideation higher in medication (15%) than CBT (6%)

Slower initial response with CBT

Recent research.....ADAPT

Goodyer et al (2007)

208 young people aged 11-17 with moderate/severe depression assigned to

- medication (SSRI) and routine care (n=103) or
- medication (SSRI) and routine care and 12 session CBT (n=105).

By 28 weeks 61% of SSRI group and **53% of the CBT** group were very much or much improved.

Addition of specialist CBT to medication did not have any additional effect over usual care

Recent researchTORDIA

Brent et al (2010)

334 young people aged 12-18 with SSRI resistant depression (not responded after 2 months) assigned to

- medication switch (different SSRI) (n=85)
- medication switch (different SSRI) plus CBT (n=83).
- medication switch to Venlafaxine (n=83)
- Medication switch to Venlafaxine plus CBT (n=83)

At 12 weeks, **CBT plus medication** switch showed a higher response rate (54.8%) than medication switch alone (40.5%).

The addition of CBT for treatment resistant depression is more effective than medication alone

Depression treatment –summary

- Many studies have shown CBT to be an effective intervention for childhood depression
- Earliest trials compared CBT against waiting list and showed large treatment effects
- Recent comparative trials have found that CBT and medication can both be effective
- Research confirms that CBT offers an effective psychological intervention for childhood depression

Anxiety Disorders

- No NICE Guideline
- Cochrane Review (James, Soler & Weatherall 2009)
 - 13 RCTs assessing CBT vs comparison
 - 6-18years of age, mild to moderate mixed anxiety disorders
 - 498 assigned CBT vs 311 comparison groups
 - CBT effective for 58% of participants vs recovery in waiting list of 28%

Coping Cat (Kendall 1994)

Coping Cat 16 sessions

- Sessions 1-8 Training
 - F Recognise anxious feelings & somatic reactions
 - E Clarify cognitions in anxiety situation
 - A Develop plan to cope (modify self talk)
 - R Self Rating and rewards
- Sessions 9-16 Practice
 - Graded exposure and STIC tasks

Coping Cat Evaluation

- Kendall (1994)
 - 47 children aged 9-13 years with anxiety disorders
 - 27 received CBT, 20 waiting list control
 - CBT (Coping Cat) superior at post treatment to waiting list control maintained at 1 yr.
 - 64% of children no longer met criteria for their primary pre-treatment anxiety diagnosis; 5% in the waiting list control.
- Kendall et al (1997)
 - 94 children aged 9-13 years with anxiety disorders
 - 60 received CBT, 34 waiting list controls
 - Post treatment gains in CBT group maintained at 1 year
 - 53% no longer met criteria for primary anxiety disorder at end of treatment; 2/34 in control

Coping Cat Evaluation

- Kendall et al (2004)
 - Long term follow-up of 1997 cohort. 86 (91%) assessed average of **7.4 yrs post treatment**
 - 90% (child interviews) and 80% (parent interviews) no longer met criteria for their primary anxiety diagnosis
 - Results suggest that a majority of anxiety disordered children maintain treatment gains in the medium term following CBT

Coping Cat v Medication

- Walkup et al (2008)
 - 488 children aged 7-17 years with anxiety disorders
 - Assigned to CBT, Sertraline, CBT + Medication or placebo drug
 - Clinician Global Impression Improvement Scale found post treatment improvement for CBT (59.7%) and Sertraline (54.9%) compared to placebo (23.7%)
 - Combined therapy sig superior to mono-therapy (80.7%)

Medication and CBT are both effective in reducing anxiety

Anxiety Treatment - Conclusions

- CBT for the treatment of anxiety disorders in children has a strong evidence base
- CBT is an effective psychological treatment for anxiety disorders in children
- Post intervention gains are maintained

Methodological issues

- Most trials have been undertaken in the USA or Australia and **only a few UK** studies have been reported
- The **sample size** is often small and many are underpowered
- Earliest studies were **effectiveness** studies comparing CBT to waitlist conditions
- **Follow-up** is often lacking and we know little about the longer term benefits

“Children”

- The **age span** of children in many studies is large (7-18).
- Children are generally treated as the same and yet the cognitive, intellectual and reasoning abilities of a 7 year old are very different to those of a 16 year old.
- Few studies have included younger children and little is known about the effectiveness of CBT on children **under 7 years** of age.

Trial participants

Many trials have rigid inclusion criteria and the degree to which trial recruits are **representative of service referrals** is questionable .

Exclusion in some PTSD trials occurred when

- Developmental delay
- Not fluent in English
- Taking medication or co-morbid anxiety/depression
- Considered too disruptive
- No long term caretaker
- Carer abusing substances or unwilling to participate in treatment sessions

How good are our interventions?

		Psychotherapy End Treatment Remission		Review
Anxiety (n=809)		56%		James, Soler & Weatherall 2009
Depression (n=1744)		50%		Watanabe et al 2007

Treatment vs Natural Recovery?

	Waitlist/control Remission	Psychotherapy End Treatment Remission		Review
Anxiety (n=809)	28%	56%		James, Soler & Weatherall 2009
Depression (n=1744)	35%	50%		Watanabe et al 2007

Treatment non-response

	Waitlist/control Remission	Psychotherapy End Treatment Remission	Not responded	Review
Anxiety (n=809)	28%	56%	44%	James, Soler & Weatherall 2009
Depression (n=1744)	35%	50%	50%	Watanabe et al 2007

Are psychological interventions available?

- Few children are referred for treatment

33% of those with anxiety and 45% of those with depressive disorders had contact with any health service (primary & secondary) over 3 years

(Ford et al 2008)

- Specialist treatment is scarce

UK survey of child focused CBT highlighted that CBT was the dominant approach of only one in five specialist CAMHS clinicians

(Stallard & Udwin 2007)

Prevention

- **Universal:**
 - Good reach, low drop out
 - No screening
 - Opportunity for prevention and intervention,
 - But provided to large numbers with relatively little need
 - Sufficient depth and dosage?
- **Selected/Indicated :**
 - Targeted use of limited resources
 - Larger effect size
 - Potentially stigmatising
 - Primary preventive benefits limited

Depression prevention in schools

Merry et al (2004): Cochrane review

- 18 psychological interventions for preventing depression
- 2 included an active comparison or placebo condition
- No sig difference between universal vs targeted programmes

“Given the practical difficulties inherent in implementing a targeted programme, pursuing the implementation of universal depression prevention programmes is warranted”

Depression Prevention

Horowitz & Garber (2006)

- 30 depression prevention studies with most being treatment rather than prevention.
 - Wide variation in outcomes with selective more effective (0.3) than universal programmes (0.12)
- “ although universal programmes yield low effect sizes, they still could be cost-effective if they are able to prevent even a small number of cases at comparatively low cost”.

Depression Prevention

Spence & Shortt (2007)

- Reviewed 12 universal depression prevention trials and identified significant methodological concerns.
- Samples small, inadequate power, absence of placebo comparison groups to control for non-specific effects and increased attention

“...there is insufficient evidence regarding efficacy and effectiveness to justify widespread dissemination of universal, school-based interventions for the prevention of depression...”

Depression Prevention

Calear & Chrisensen (2009)

- Reviewed 42 RCTS relating to 28 different school based depression programmes
- The majority were based upon CBT (76%) with trained mental health leaders were more effective than teachers

“ A number of universal programmes were effective so it may be factors other than the delivery style per se (universal versus targeted) that are important”.

Recent trials: Australian BeyondBlue

Sawyer et al (2010)

- 5634 adolescents in Year 8 (aged 13)
- assigned to CBT based intervention (BeyondBlue) or treatment as usual
- Universal programme delivered over 3 years by trained teachers
- Multi-level with interventions targeting students, school and the community

No significant differences between groups in depressive symptoms over the 3 years.

Recent UK trials.....

Challen et al 2010 (Interim report)

- Approx 6,000 year 7 students (aged 12) from 22 schools
- Pragmatic controlled trial (not randomised)
- 18hr CBT intervention Penn Resiliency Programme,
- Provided to groups n=15 by trained school staff

Stallard et al (2010)

- Approx 5,000 year 7-11 students (12-16) from 8 schools
- RCT to CBT, treatment as usual (PSHE), enhanced PSHE (attention control)
- 9hr + 2 booster programme Resourceful Adolescent Programme
- Provided to whole classes (n=30) by trained psychology assistants

Depression prevention – conclusion

- Findings are mixed and conclusions hampered by poorly designed small scale studies
- **CBT tends to be the most commonly used model**
- Most studies have assessed immediate treatment effects e.g. changes in symptoms not primary prevention
- Targeted interventions produce larger effects than universal programmes
- Targeted interventions are stigmatising and practically difficult to deliver in schools
- Teachers are less effective at delivering depression prevention programmes than health staff

Anxiety Prevention

Neil & Christensen, 2009

- Meta review of 27 trials describing 20 programmes, most (78%) were based on CBT

“Most universal, selective and indicated prevention programmes are effective in reducing symptoms of anxiety in children and adolescents with effect sizes ranging from 0.11-1.37”

“ ...anxiety programmes may be the interventions of choice in school environments”

Anxiety Prevention: FRIENDS

Based on the Coping Koala programme, Paula Barrett developed FRIENDS as a:

- Preventative CBT programme for emotional disorders
- Can be provided as a universal intervention
- Delivered in schools
- Delivered by non-specialist mental health professionals

FRIENDS

Lowry-Webster, Barrett & Dadds (2001)

- 594 (10-13yr) FRIENDS v comparison group
- sig lower levels of anxiety and depression in FRIENDS group post-treatment and 12 month follow-up

Barrett, Farrell, Ollendick & Dadds (2007)

- 3 year follow-up, gains maintained
- FRIENDS: “High Risk” each year - 13%, 15% and 19%
- Non-intervention group: increase in “high risk” 17%, 36%. 34%

“Non-mental health” specialists

Barrett & Turner (2001)

- 489 (10-12yr) children with teacher v psychologist led FRIENDS v comparison group
- both FRIENDS interventions resulted in significantly fewer post-treatment anxiety symptoms.
- No difference between school and mental health professionals

In the real world?

A series of UK published evaluations have shown significant post FRIENDS:

- reductions in anxiety
- increases in self-esteem
- reductions in bullying
- improvements maintained at 1 year follow-up
- tentative evidence of a preventive effect

Stallard, Simpson, Anderson, Carter, Osborn & Bush (2005); Stallard, Simpson, Anderson, Hibbert & Osborn (2007); Stallard, Simpson, Anderson & Goddard (2008)

UK Trial - PACES

- Approx 1,800 year 4/5 students (9-11) from 54 schools
- RCT to CBT (health delivered) vs CBT (school delivered) vs treatment as usual (PSHE)
- CBT is FRIENDS, 9hr + 2 parent sessions
- Provided to whole classes (n=30) of children

Anxiety Prevention: conclusion

- Evidence more consistent
- Anxiety prevention programmes based on CBT are effective
- Post Intervention gains are maintained in the medium term
- CBT anxiety prevention can be delivered by school staff
- Programmes can readily fit within school timetable & curriculum
- Need to explore primary preventive effect
- Need to compare with other PSHE interventions

So where next?

- Research is limited but of all the psychological therapies **CBT has the largest evidence base**
- We need developmentally appropriate **theoretical models** to inform the content of our interventions
- We need to undertake evaluations under **real world** conditions
- To ensure **expert training** and maintenance of **treatment fidelity**
- To identify important **mediators and moderators**
- To develop a **spectrum of interventions** including prevention
- To demonstrate the **longer term and cost benefits** of psychological interventions

Thank You

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