Somatization in childhood
The child psychiatrist's concern?

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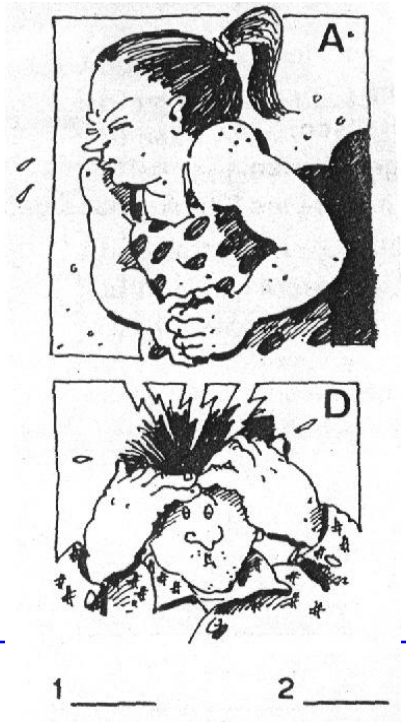
Physical symptoms in UK adolescents Vila et al, 2009

In the previous 2 weeks

	Yes	***"a lot"***
– Headaches	66%	13%
– Nausea	40-49%	8-12%
– Sore muscles		
– Low energy		
– Lower back pain		
– Hot/cold spells		
– Stomach pains		
– Weakness		



Parental/child judgement on children's physical symptoms

- *Normalising*

  Temporary, trivial, explainable problem
  - strenuous exercise, indigestion
- *Somatising* : Is the child sick?
- *Psychologising*
  - Linked to worries?
  - Trying to get away from something such as school?
- Most parents know how to make this judgement intuitively, they "know their child"

Outline

- When do these symptoms matter in children?

- Somatization and somatoform disorders
- The bio-psychosocial perspective

- Ways in which they can be managed and their impact minimized (evidence based treatments)
- Care pathways : whose concern?

Physical symptoms in UK adolescents Vila et al, 2009

Out of 24 symptoms

- At least one symptom 37%
- Four + 12%
- Seven + 4%
- Thirteen + 0.8%

Functional physical symptoms

- *Offord et al (1987)* 7.6%
  aged 12-16 years (11% girls, 4% boys) are reported by their parents as having distressing physical symptoms or perceived them as sickly
- *Goodman and McGrath* (1991) 2-10%
  of children have "functional" unexplained aches and pains
- *Apley and Naish* (1958): 10%
  of schoolchildren have at least 3 bouts of severe abdominal every 3 months

Physical symptoms in UK adolescents Vila et al, 2009

Correlations *(r values)* between CSI physical and psychological symptoms/ impairment

- Depressive symptoms (MFQ) 0.81
- Emotional (SDQ) 0.50

- Impairment (concentration,enjoyment,seeing friend, school) 0.62

Somatisation in Pediatric Primary care

Campo et al, 1999

- Pediatric visits with unexplained aches & pains

  2% were somatisers (complained "often")

  11% complained "sometimes"
- Somatisers:
  - *half* had psychosocial problems (parents, Drs)
  - *a third* were frequent health service users
  - *16%* missed school "a lot"

Somatisation: Definition

- Somatic symptoms as a manifestation of psychological difficulty or distress
- A tendency
  - to experience and communicate somatic distress and symptoms unaccounted for by pathological findings
  - To attribute them to physical illness
  - To seek medical help

Lipowsky, 1988

Somatisation and ICD-10 disorders in childhood

- F45: Somatoform disorders
  - —*Persistent somatoform pain disorder*
- F48: Neurasthenia (CFS 2%- 2 per 1000)

- F44 Dissociative (Conversion) disorder

(UK 1.30 /100,000; Australia 2.3-4.2)

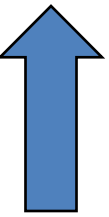
New ICD- 11 and DSM-V classifications

- Somatoform disorders >>>
  - Bodily distress syndrome (ICD-11)
  - Complex Somatic symptom disorder (DSM-V)

"Unexplained" or "functional" medical symptoms
(CFS, fibromyalgia, irritable bowel syndrome)

Physical complaint (s)

with subjective distress/preoccupation ++,
illness beliefs
impairment



health help seeking

Functional impairment in Chronic Fatigue Syndrome (CSF) - worst illness episode

[Much higher than in juvenile arthritis or depression]

Bedridden	60%
No friends seen	84%
Strain with family	56%
Non school attendance	68%
Time off school:	3 terms
Length of episode:	17 months

(Imperial College Studies, 1998)

Pervasive withdrawal

Pervasive refusal/Dissociative stupor (F44.2)

- Multiple physical symptoms and severe impairment/ fatigue
- Severe withdrawal *("refusal")*
  - Movement, speech, self-help
  - Frozen, learned helplessness

Psychiatric co-morbidity

- **75% of** children presenting to paediatricians with recurrent abdominal pain have a co-morbid anxiety disorder (Campo et al)

- **70%** of YP with CF have had a diagnosable psychiatric disorder in the previous year (IC studies)
  - 40% at interview
  - *60% following recovery* from CFS (mainly anxiety disorders)

Links between RAP & Parental Anxiety disorders

- Parental anxiety in the child's first year of life predicts RAP in children (11%) aged 6 years
  - (OR M 1.53; F: 1.38) Ramchandani et al, JAACAP 2006

- Mothers of children with RAP (n=59) (vs other paediatric) have more histories of anxiety and depression
  - (OR 6.1; CI 1.8-20.8) Campo et al, 2007

- Characteristic in parents : co-morbid somatic and psychiatric parental ill health

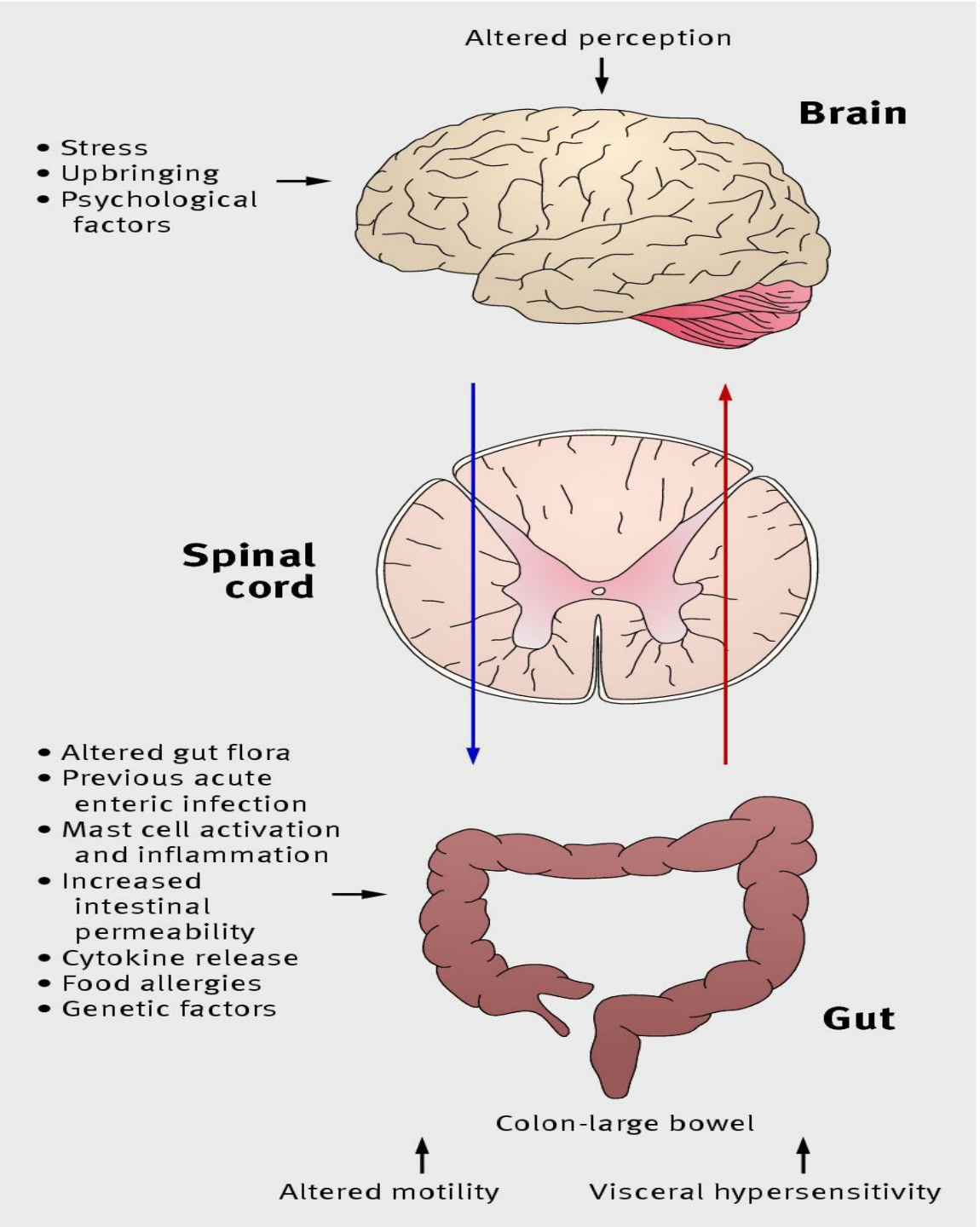
Longitudinal studies of somatic symptoms in childhood

- Single/multiple childhood somatic symptoms predict somatic symptoms and psychiatric symptoms/ disorders in adulthood
- Anxiety/Depressive symptoms and disorders in childhood predict multiple somatic symptoms and psychiatric symptoms and disorders in adulthood

(Hotopf et al., 1998; 1999; Fearon and Hotopf, 2001; Henderson, Hotopf, and Leon, 2009 (Harvey et al., 2008) (Fichter et al., 2009) (Steinhausen and Metzke, 2007) (Dhossche et al., 2001) (Janssens et al., 2010) (Lieb et al., 2002)

When do these symptoms matter in children?

- They are common and often multiple
- When they are an expression of somatization and somatoform disorders they can be highly impairing and lead to multiple medical consultations
- There is a strong association with anxiety and depressive disorders – across different lines of evidence

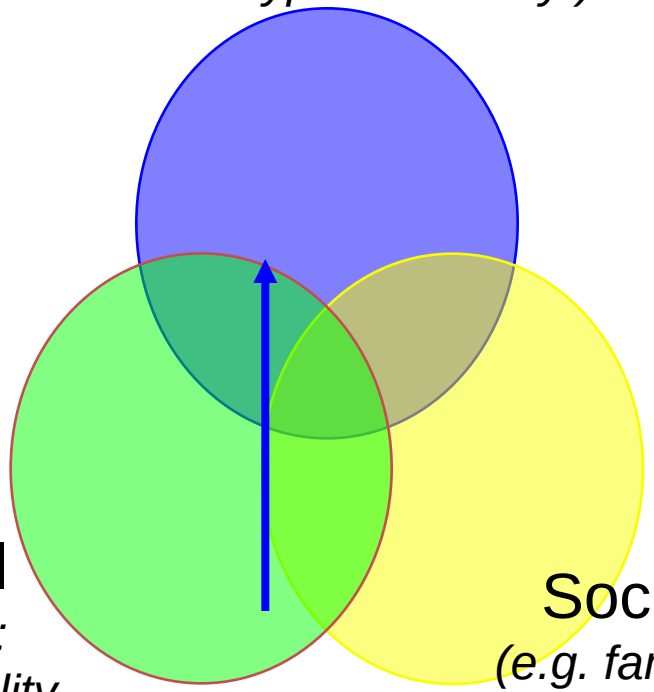


The biological multi-organ approach to Irritable Bowel Syndrome

Biopsychosocial framework for adjustment in children

Biological

(e.g. severity of a physical disorder, pain threshold visceral hypersensitivity)



Psychological

(e.g. temperament: sensitivity, emotionality rigidity)

Social/Environmental

(e.g. family health and attitudes, peer interactions, educational pressure)

Most risk of maladjustment with risk factors in all three domains

Visceral sensitivity

- Water load symptom provocation test (wlspt)
  - Significantly greater increases in gastrointestinal symptoms children with gastrointestinal symptoms, predicted by their naturally occurring symptoms

Walker et al, 2006

Daily stressors and somatic/emotional symptoms in children with Recurrent Abdominal Pains (RAP)

- 154 paediatric patients RAP vs 109 well controls
- Telephone inquiry: diary of hassles and symptoms over 6 consecutive days
- RAP reported more daily stressors (home and school)
  - association between daily stressors and somatic symptoms stronger in RAP
  - strongest in those with trait negative affectivity
- Appraisal & coping with pain
  - pain patients less confident of their ability to change or adapt to stress
  - less use of accommodative coping strategies

Walker et al, 2001, 2007

RAP and parental health/attitudes

- Children with RAP and well children
- Giving attention the symptom (experimentally) nearly doubled symptom complaints by (specially girls with pain symptoms) in both groups
- Distraction reduced symptoms by half

- ***Children*** reported Distraction (compared with Attention) made them feel better
- ***Parents*** of pain patients rated distraction as more likely to have a negative impact on their children than attention

Walker et al, 2006

Bio-psycho-social contributory factors

- **Biological**
  - Triggered by infection/illness episode
  - Visceral hyper-sensitivity
  - Genetic aspects (family history of similar complaints)

  RAP: Dys-regulation of serotonergic neurotransmission (gut peristaltic activity) *

  CSF: Immunological anomalies
  - Low ferritin level
  - Cortisol anomalies
  - Inactivity

- **Psychological**
  - High stress levels (stress sensitivity/reactivity)
  - Personality style that is insecure, anxious, sensitive, conscientious (high expectations)
  - Coping strategies (maladaptive) (threat avoidant)
  - Illness beliefs (disease conviction)

*** 5-HT neurotransmission relevant to anxiety, depression, visceral pain, gut motility, and response to life adversity**

Bio-psycho- social factors

- Stressful events
- Family physical/psychiatric health problems
  - Maternal mental distress
- Parental emotional over-involvement (EE- EOI)
  - higher in CFS than in juvenile arthritis or emotional disorders
  - reinforcement of illness behaviour
  - Illness beliefs (disease conviction)
- Falling behind at school / with friends

Stress, illness behaviour and the sick role – D Mechanic & E Volkart, 1961

- The attractiveness of the "social role of the sick person" may motivate persons to seek help
- The (social) sick role means
  - release from usual obligations, evading responsibilities
  - it takes precedence
  - is legitimized medically and by intimates
  - **it provides an escape from intolerable demands**
- Its desirability may motivate to seek its protection
- Inclination to adopt the sick role= to consult medically
- Stress only increases medical consultations in people inclined to adopt the sick role

Management of RAP

- Pain management
  - relaxation
  - distraction techniques
  - negotiated graded return to school if appropriate
- Address contributory factors
  - seek to reduce stresses (ie school/ peer interactions)
  - decrease attention by parents to the symptoms (reinforcement)
  - set up non-pain based shared activities
- Treat co-morbid anxiety/depressive disorder
- Family cognitive behavioural treatment

(best evidence base: Sanders et al, 1994; Robbins et al, 2005; Levy et al 2010)

CFS in adolescents: evidence base

(outcomes: school attendance & fatigue)

- Rehabilitation better than “pacing” - randomised pilot – Wright et al
- Taking up treatment at out-patients better than declining it - open study - Viner et al 2004
- CBT better than waiting lit- - Stulemeijer et al, 2005
  – marginally better than TAU – Chalder et al, 2010
- Internet CBT better than usual care-Sanne et al, 2012

Trajectories of RAP symptoms and impairment

– Mulvaney et al, 2006

- Low risk group (70%)
  - low levels of symptoms and impairment, improved within 2 months, still OK 1-5 years later; more boys
- Short-term risk group (16%)
  - highest initial symptoms and impairment, improved greatly following months and still at year 5 (80% girls); similar outcome to low risk group; **intermediary in anxiety/depressive symptoms**
- Long-term risk group (14 %)
  - high levels of child reported (not parent reported) symptoms and impairment maintained; **high levels of initial anxiety/depressive symptoms, lower perceived self-worth, more negative life events**

Care pathways

Bio-psychosocial approach

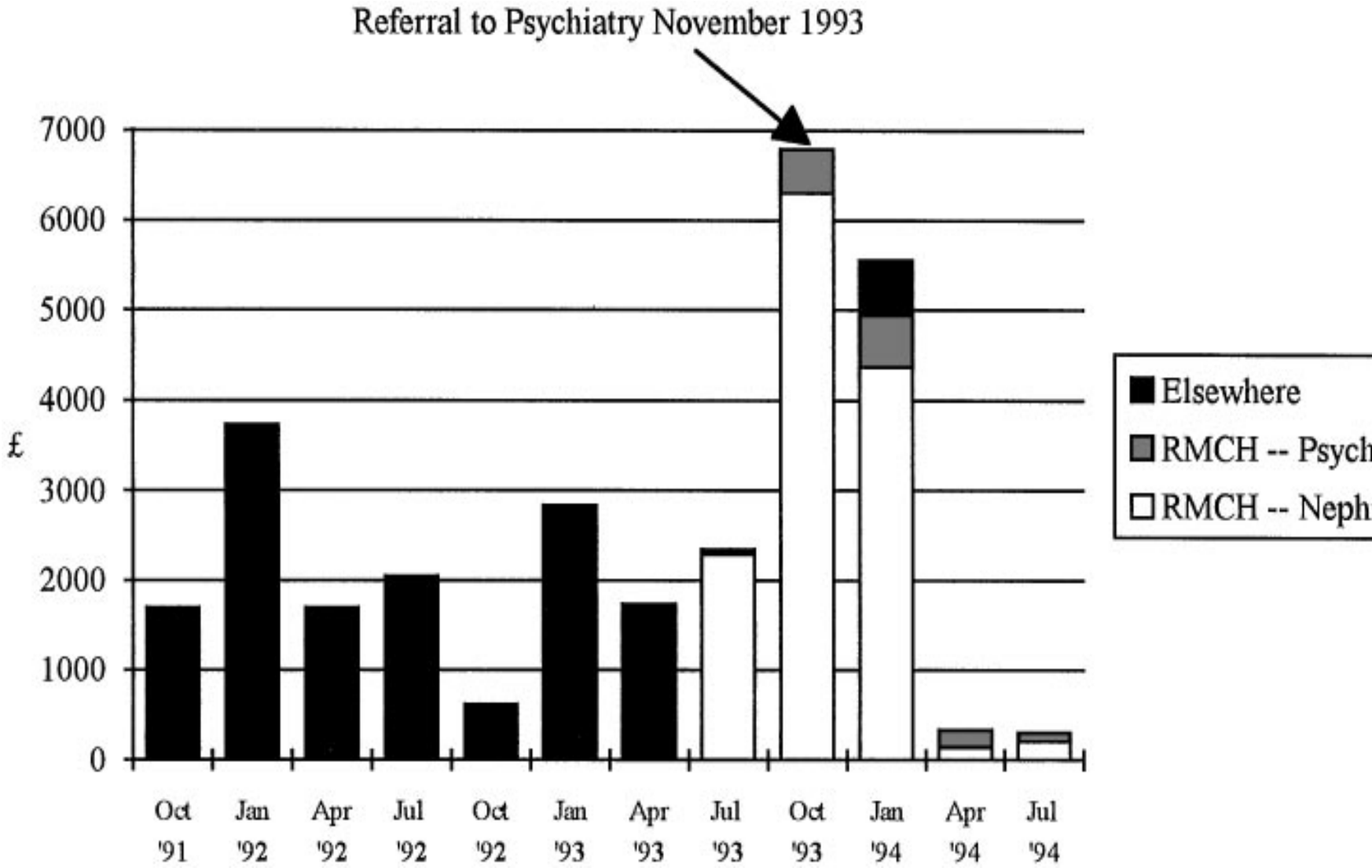
- 1 Primary care
- 2 Paediatric assessment and initial management
    - screening for stress/anxiety or depression
  - Or CAMHS
- 3 Paediatric liaison skills/teams
- 4 Joint paediatric-PL work for protracted cases
- 5 Paediatric/psychiatric in-patient care

- Prevention of adult somatoform/anxiety disorder

The benefits of PL CAMHS teams

- **Bridging the gap between physical and psychiatric paediatric disorders**
- Timing: Immediate response to referral and access to ill children at a critical time
  - Improved take-up rates *(vs generic CAMHS)*
- Specialist multi-disciplinary approach
  - **bio-**psychosocial including medical expertise
  - differential diagnosis with paediatric disorders
- Close links (bridging gap) with generic CAMHS
- Reducing hospital use costs

Case A: cost of care per quarter. Total medical costs: District Hospital £15,033, Specialist Nephrology £13,308. Specialist/PL Psychiatry £1,358 (North and Eminson, 1998)



Conclusions

- Why do these symptoms matter in children- common?
  - Common, bothersome, impairing, medical consulting
- Somatization and somatoform disorders
  - strong links with anxiety/mood disorders and adult mental health problems
- The bio-psychosocial approach is best
- Clinical & research evidence support the efficacy of family psychological interventions
- Care pathways
    - need improving, through the development of Paediatric Liaison teams