

PSYCHOSOCIAL OUTCOMES IN CHILDREN WITH SHORT STATURE

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Healthy physical and psychological development during childhood and adolescence is essential to become a well-adjusted and socially functional adult. Any abnormality during this time can be detrimental to normal development. In addition to the physical limitations associated with being shorter than average, social stigma may affect self-perception and social integration.

THEREFORE, HOW INDIVIDUALS PERCEIVE THEIR HEIGHT AND APPEARANCE AND THEIR ABILITY TO COPE WITH THEIR OWN ATTITUDES AND THOSE OF OTHERS CAN DETERMINE THE SEVERITY OF IMPAIRMENT.

Consequently, although short stature among healthy children is most commonly not associated with any psychosocial disadvantage, children with poor coping skills or a maladaptive personality type and height that is substantially below the norm for age group may be at risk for emotional and behavioural problems (Table 1).

Table 1. Psychological attitudes to height that indicate referral for counselling
<ul style="list-style-type: none"> • Personal: e.g., "My appearance is my own fault. It's only me that feels this way - I am not as worthy as my peers." • Pervasive: e.g., "The consequences of my short stature will affect all areas of my life and everything I try to do." • Permanent: e.g., "My short stature is not only a problem at school, but will disadvantage me for the rest of my life."

Factors that might be important in influencing how well a child or adolescent copes with being shorter than peers are listed in Table 2.



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Table 2. Factors that may influence coping skills in children and adolescents with short stature¹⁻⁹

Risk factors for poor coping skills	Protective factors for positive coping skills
<i>Individual factors</i>	
<ul style="list-style-type: none"> • Health status and aetiology of short stature (medical cause of short stature vs. idiopathic short stature) • Perceived shorter height/personal dissatisfaction with height • Older age • Male gender • Poor coping strategies 	<ul style="list-style-type: none"> • Good physical health • Personality • Sense of humour • Good self-esteem • Personal skills and competencies • Positive body image
<i>Social environment</i>	
<ul style="list-style-type: none"> • Family situation; e.g., having a younger, but taller sibling 	<ul style="list-style-type: none"> • Socioeconomic status

<ul style="list-style-type: none"> • Lack of support from parents and siblings • Lower socioeconomic status • Negative beliefs about the importance of height • Poor social integration and prejudice; e.g., being teased or juvenilisation • Other psychosocial stresses (major life events or day-to-day problems; e.g., bullying) • Cultural stereotypes regarding short stature (e.g., tall men are successful) 	<ul style="list-style-type: none"> • Social support & friends • Parental support • Normal integration and treatment at school • Positive cultural influences
Academic performance	
<ul style="list-style-type: none"> • Lower intellect and cognitive ability 	<ul style="list-style-type: none"> • Academic achievement • Intelligence • Mature behaviour
Participation	
<ul style="list-style-type: none"> • Physical limitations of daily activities • Lack of functional independence 	<ul style="list-style-type: none"> • Appropriate sport and other activities • Association with children of similar age • Self-esteem

DO SHORT CHILDREN HAVE WORSE QUALITY OF LIFE?

Some of the psychosocial impairments that have been reported in relation to children who are shorter than average include physical limitations, behavioural problems, below average academic performance, lower visual-motor skills, less social support from teachers, low self-esteem, overprotectiveness from parents and teachers, being teased and bullied, avoidant behaviour, feelings of guilt, anxiety, depression and difficulty establishing interpersonal relationships.^{1,3,11,13,15,17-20}

However, studies do not consistently show that children diagnosed with idiopathic short stature will be psychosocially impaired. On the contrary, many epidemiological, cross-sectional population studies indicate that short children are not disadvantaged, either academically or socially.^{3,4,11,14-19}

The Wessex Growth Study was a prospective longitudinal cohort study, which recruited an unselected population of short, but otherwise healthy children from a wide range of socioeconomic backgrounds and followed them from age 5-6 years throughout childhood and adolescence to age 18-20 years. It failed to demonstrate any evidence of serious psychological or academic disadvantage before or after puberty.^{4,14} Furthermore, in the follow-up of young adults with short stature during childhood, neither childhood nor adult stature was associated with an increase in high risk behaviours, such as alcohol or drug abuse or severe violence.⁴ Another larger study of 712 school children with a mean age of 12 years found no difference between short children and their peers in social, emotional or behavioural outcomes, including depression, optimism, social support or victimisation, by either self- or teacher-reported findings.¹⁵

Results from studies investigating quality of life in short adults are also variable. Some studies associate short stature with reduced chance of marriage, higher unemployment and self-reported problems in social functioning, whereas others reveal no differences between short adults and those of normal stature.¹

A LARGE HEALTH SURVEY INCLUDING MORE THAN 14 000 ADULTS LIVING IN PRIVATE HOUSEHOLDS IN ENGLAND CONCLUDED THAT SHORTER HEIGHT IN ADULT LIFE IS ASSOCIATED WITH A SIGNIFICANT REDUCTION IN HEALTH-RELATED QUALITY OF LIFE.²¹

However, the main subscales that lowered quality of life scores were problems with 'mobility', 'usual activities' and 'pain/discomfort', suggesting that other confounding health issues rather than height *per se* might have influenced the assessment.

WHY DO SOME STUDIES OF SHORT PEOPLE SUGGEST PSYCHOLOGICAL PROBLEMS AND OTHERS NOT?

Psychosocial problems may be reported by the children themselves, teachers, parents or healthcare providers. This is important, because there are often inconsistencies between different reporters and depending on how the information is gathered. Parents may report significant impairment of quality of life measures for their child, whereas questioning the child themselves reveals no apparent impairment; patients referred for medical assessment of short stature may report psychosocial stress, whereas short individuals in general population-based studies do not. Even the order in which questions are asked may influence the outcome on psychosocial quality of life tests. Therefore, results from psychosocial studies of individuals with short stature need to be interpreted with caution, taking care to consider potential confounding biases.^{1,4,5,10-17} For example, parental

attitudes may be influenced by concern for the child's future or their own past experiences of being short, whereas the child may be too young to adequately assess their own functioning, or have a tendency towards denial.¹

Two contributing factors may help to explain discrepant results among psychosocial studies of short children, adolescents and adults. The first is that where there is an underlying medical condition responsible for the short stature, such as a genetic condition, chronic illness or intrauterine cause of small for gestational age, this condition and possibly the need for chronic interventions may also be responsible for associated developmental problems, such as low intellect and poor academic performance.^{17,19} In turn, these may influence behavioural and emotional adjustment (including self-concept) during childhood and outcomes in adulthood, such as employment, income and marital status.^{3,11} The unusual appearance associated with conditions like Turner's syndrome may further serve as an independent source of stigmatisation.

MEDICAL REASONS FOR SHORT STATURE MIGHT ALSO HELP TO EXPLAIN THE DISCREPANCY BETWEEN THE CLINIC-BASED IMPRESSION THAT INDIVIDUALS WITH SHORT STATURE ARE SEVERELY DISADVANTAGED BY THEIR HEIGHT AND COMMUNITY-BASED STUDIES OF HEALTHY CHILDREN THAT FIND LITTLE OR NO DIFFERENCE BETWEEN SHORT AND NORMAL STATURE.⁵

Secondly, and perhaps more importantly, especially among individuals with idiopathic short stature, environment, and in particular the family environment, may play a significant role in how the child or adolescent experiences their short stature.¹³ For example, overprotective parents, low self-esteem, introverted personality type and differential treatment by teachers may predispose to apparent low intellect, poor academic performance, poor coping skills and social immaturity. The tendency to treat a child according to their size, rather than their chronological age (juvenilisation) may be associated with exclusion from age-appropriate activities, or lower expectations of these children than from children of the same age and normal height.⁶ Similarly, being the only individual with short stature in a family of average height may lead to differential treatment. Family support is extremely important.

A POSITIVE, CONFIDENT AND MOTIVATED CHILD WITH GOOD PROBLEM SOLVING SKILLS IS LESS LIKELY TO EXPERIENCE ADVERSE PSYCHOLOGICAL AND SOCIAL OUTCOMES.

Furthermore, the child's perception of his/her height appears to be more important than the

actual height itself and children with a positive body image and personal satisfaction may be less affected by their height as they grow up.⁶ Children with short parents or siblings tend to present with lower indices of anxiety, depression and difficulty establishing social relationships and with higher indices of good adjustment.¹³

In the Wessex study, stature did not predict psychosocial or academic outcome. However, measured intelligence and psychological development were significantly associated with social class.¹⁴ The same was demonstrated among young adults. While adult height was not associated with poorer psychosocial adaption, there was a significant association of female gender and lower socioeconomic status with personality functioning, education, employment and coping with everyday living tasks, such as managing finances.⁴

Whatever the reason for maladjustments in short individuals, these studies highlight the importance of psychological support during growth and development.¹³

PSYCHOSOCIAL ASSESSMENT

Thorough psychological evaluation should be performed during the assessment of children with short stature and should include both emotional effects, such as wellbeing and adaptation, and social effects, such as the presence of psychosocial stressors, peer integration and social support. Where necessary children and their families should be referred for professional psychological counselling, which is focussed on improving assertiveness and coping skills (Table 3).

Table 3. Psychosocial management of children with short stature^{7,8}

<ul style="list-style-type: none"> • Promotion of assertiveness and resistance to juvenilisation • Promotion of self-reliance and age-appropriate behaviour • Encouraging the development of strengths <ul style="list-style-type: none"> o Abilities and interests o Physical activities and sports where size is not especially important (e.g., hockey, soccer, cricket, gymnastics, boxing & martial arts, cycling, swimming, dancing) • Development of coping skills for healthy peer relationships; involvement in youth groups or clubs • Problem solving where height may pose an obstacle to activities; e.g., using a step to reach high objects; choosing age-appropriate clothing

CONCLUSIONS

Accurate measurement of height and growth should be performed regularly in all children and meticulously documented for future comparisons. It allows early identification of medical disorders

that may be amenable to treatment, facilitating timeous individualised intervention. Furthermore, although short stature itself is not an independent predictor of a poor psychological outcome, it indicates consideration of a thorough psychosocial assessment to help identify children who may be at risk, but in whom counselling and social support may foster a well-adjusted and happy member of society.

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