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Article · January 2016

DOI: 10.4172/2376-127X.1000228

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The Impact of Short Stature on the Children's Psychology: An Examination of Child Psychology, Peer and Familial Relationships and Academic Performance

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Received date: Jan 27, 2016; Accepted date: Feb 29, 2016; Published date: Mar 7, 2016

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Abstract

Purpose: This study investigated the impact SS (short stature) on children's psychology, peer and familial relationships and the academic performance.

Methods: A cross-sectional quantitative face-to-face survey of 656 males and female children aged 4-18 years. It was conducted from March 2015 to April 2015 in Jeddah, Saudi Arabia.

Results: There was a weak significant relationship between height and negative psychology of SS children. There was no relationship between SS children and negative peer relationships, familial relationships or academic performance

Conclusion: This research found that there was no relationship between SS children and negative psychology, peer relationships, family relationships or academic performance.

Keywords: Short stature; Psychology; Academic performance; Family relationships

Introduction

Short stature (SS) is defined as height more than two standard deviations below the mean for age and gender [1]. SS could be a result of organic or non-organic causes. Organic causes include: endocrine abnormalities, bone lesions, intrauterine growth retardation, chromosomal abnormalities (Dawn syndrome, Russell-silver syndrome) or other causes. Non-organic causes include: familial short stature, malnutrition, constitutional delay of growth and adolescence [2].

Around 2% of all children present with SS. Boys tend to come to medical attention more frequently than girls. However, the percentage of girls with organic disease significantly exceeded that of boys. Differences in height were more pronounced around the age of 9 years. Sex was not associated with severity of short stature [3].

The research on children with SS shows mixed results regarding psychosocial problems. With some studies suggesting that psychosocial problems are related to SS while other studies do not find this relationship [4]. Bullying due to SS is one of the most correlated risk factors to psychosocial stress in children [1]. IQ scores in children suffering from SS were not generally affected. An SS child with low socioeconomic status was a better predictor of underachievement [5]. However, some SS children have feelings of poor accomplishment.

SS and Psychosocial

The research on children with SS shows mixed results regarding psychosocial problems. With some studies suggesting that psychosocial

problems are related to SS while other studies do not find this relationship [4]. Bullying due to SS is one of the most correlated risk factors to psychosocial stress in children. SS has been related to frequency of bullying, stigmatization and social isolation, which can lead to chronic psychosocial stress. Parents of SS children, compared to parents of children with normal height, report that their children are less socially competent and in general have more social problems. A German study found that SS children scored significantly lower on self-perception, social support from peers, and psychological well-being [1].

Although other studies suggest that SS children are dissatisfied with their height, measure by the body satisfaction index, this did not affect other areas of emotional wellbeing. SS children recorded more satisfaction on the self-perception profile than the control group. Interestingly, most children reported that they would like to be "average" or "quite tall" despite being in the control or SS group [6]. One study compared short stature children (6-11 years) with a control group. The researchers found no difference between the groups on self-reported social support from parents, teachers, peers and friends.

SS and Peers

Many of SS children have reported peer rejection, being bullied and teased and this is hypothesised as a reason for inhibitive behaviour [4]. However, in other studies that compared SS children to normal height children and found no significant group differences in terms of peer acceptance, social competence and self-perception [6]. The peers of SS children described them as well accepted in class and better socially adjusted than average. However, teacher and parental accounts depicted SS children with poorer attention and more thought problems compared to the control group [8].

Other research of children with SS showed that although the children had close friends that they interacted regularly with, they seemed to prefer avoiding activities that involved grouping with larger numbers of participants. Similar results were found with hobbies and sports as the children preferred individual sports like fishing and swimming rather than participating in sports involving teammates [9].

SS and Family

There are limited studies on social factors of children with physical disorders. The relationship between a child and their family is considered an important psychosocial aspect. The ones that have been conducted suggest that family support and perceived non-familial social support are important in predicting the adjustment of children with chronic physical disorders. Children of SS with supportive parents can often handle psychosocial risk factors associated with SS. Children who think that their parents are satisfied with their children's body type have more positive self-esteem. In some cases SS children have SS parents [4]. Often children are aware of their parent's perceptions. Parental dissatisfaction of their children's stature could lead to children with low self-esteem, dissatisfaction with their own body image and they may perceive themselves as unpopular, while others may view them as emotionally immature [7]. Children with supportive families are found to be less psychologically effected by SS [4]. Parental perception of their children's stature is important as it can impact children's body image and self-esteem [7]. Research of SS in the family context generally uses teacher and/or parental reports as its main methodology.

SS and Academic Performance

Poor academic attainment is related both directly and indirectly with short stature. Expectations from teachers have been related to the appearance of SS children rather than their chronological age. One study has suggested that it might be an important factor leading to poor academic accomplishment [7]. IQ scores in children suffering from SS were not generally affected. An SS child with low socioeconomic status was a better predictor of underachievement [5]. However, some SS children have feelings of poor accomplishment.

Social criticism or an underlying medical disease may be linked to short statured children facing academic difficulties and emotional stress. Relieving educational and psychosocial difficulties is quite possible if the proper means were used to do so. It is important that health care specialists, teachers and parents have enough recognition of the possible academic, psychological and social problems related to short stature and growth delay in order to be able to support the normal development of the child facing short stature and step in immediately when there is a need to do so [10].

Method

A cross-sectional study was conducted to examine the relationship between SS children, their psychology, their peers and family, and academic performance. Data collection took place in various malls in Jeddah, Saudi Arabia between March-April 2015. The population was 656 children and adolescents between the ages of 4 to 18 years. The population was a convenience sample.

The data was obtained from a questionnaire and informed consent was acquired from the parents of the SS children prior data collection. The questionnaire, The Survey of Growth and Short Statue (SGSS),

consisted of 75 items and examined various aspects of SS children. These included; general demographic information, anthropometric measurements, physical activities, social factors, family history, psychosocial history, nutritional history, pregnancy history, birth weight and height, head circumference and presence of illnesses or any acute or chronic complication items from the questionnaire were related to psychological aspects, children's peers and family, and academic performance [7].

An interview was held with the child and their family, followed by height measurement, children responded to the questions with the assistance of parents/guardians. Height was measured in centimetres, using a medical height scale with the subjects in light clothing and without shoes. The height was recorded and later plotted on growth charts. In this study, age percentiles were determined for each subject according to the Centres for Disease Control and Prevention (CDC) growth charts. Normal height is between 5th - 95th percentiles. Short stature is height below 5th percentile.

Scores from the questionnaire were recorded and analysed using Statistical Package for the Social Sciences (SPSS) for Windows (version 16). Cross tabulation and Pearson correlation was used to analyse the relationship between the variables. Ethical approval for this study was obtained from the Research Ethics Committee at King Abdulaziz University Hospital (KAUH).

Results

The study included 656 children, 50.1% were male and 49.9% were female. The mean age of the children were 8.6 years, with a \pm 3.9 years. This study examined four variables; psychology, peers, family, and academic performance of SS children.

SS had negative impact on child psychology in 30.5% of male and 23.6 % of female children with SS. A weak, significant, negative correlation was found between height and negative impact on SS child psychology, $r = -0.18$, $n = 331$, $p = 0.001$ (two-tailed).

SS had a negative impact in 21.9% of male and 12.1% of female children's relationships with their peers at school. However, there was no significant relationship between height and a negative peer relationships of SS children, $r = -0.088$, $n = 320$, $p = 0.155$ (two-tailed).

16.6% of male and 7.7% of female children with SS had a negative relationship with their family. There was no significant relationship between the height of the SS child and the SS child's relationship with their family, $r = -0.041$, $n = 322$, $p = 0.467$ (two-tailed).

16.7% of male and female 7.7% children reported SS as negative impact on their academic performance. However, there was no significant relationship between the height of the child and the negative impact on SS children's academic performance, $r = -0.011$, $n = 320$, $p = 0.842$, (two-tailed).

Discussion

This study examined the effects of SS on child on psychology, peers, familial relationships, and academic performance. We found a significant, although weak relationship between height and psychological impact of SS. Meaning the shorter statue children had an increased negative psychology. This finding is supported by some of the research on SS [1]. However, the research examining the psychological impact of SS is mixed. Future research could explore

reasons for the mixed results and perhaps find the mediating variable(s) in this relationship.

No significant relationships were found between SS children's height and their relationships with their peers, their family or their academic performance. The finding that height did not negatively impact peer relationships of SS children is supported in the literature [7].

The relationship between SS children and family is considered important.⁴ However, there was no relationship between height and relationship with family members. This may be due to supportive familial relationships [4].

There is direct and indirect research suggesting that SS has an impact on academic performance [7,10]. However, this study did not find a significant relationship between height and academic performance. Studies suggest that variables such as socio-economic status and teacher perception of age have a greater impact on academic performance and SS [7,10].

Conclusion

In summary there is very little research examining the psychosocial factors of SS children. This study examined SS children in relationships to their psychology, their peers, family and academic performance. There was a weak significant relationship between height and negative psychology of SS children. There was no relationship between SS children and negative peer relationships, family relationships or academic performance.

References

1. Bullinger M, Sommer R, Pleil A (2015) Evaluation of the American-English Quality of Life in Short Stature Youth (QoLISSY) questionnaire in the United States. Health and quality of life outcomes 13:43.
2. Lissauer T, Clayden G (2011) Illustrated textbook of paediatrics. Elsevier Health Sciences.
3. Grimberg A, Kutikov JK, Cucchiara AJ (2005) Sex differences in patients referred for evaluation of poor growth. J Pediatr 146: 212-216.
4. Erling A (2004) Why do some children of short stature develop psychologically well while others have problems? Eur J Endocrinol 151 Suppl 1: S35-39.
5. Voss LD, Bailey BJ, Mulligan J, Wilkin TJ, Betts PR (1991) Short stature and school performance--the Wessex Growth Study. Acta Paediatr Scand Suppl 377: 29-31.
6. Downie AB, Mulligan J, Stratford RJ, Betts PR, Voss LD (1997) Are short normal children at a disadvantage? The Wessex growth study. BMJ 314: 97-100.
7. Gilmour J, Skuse D (1996) Short stature--the role of intelligence in psychosocial adjustment. Arch Dis Child 75: 25-31.
8. Skuse D, Gilmour J, Tian CS, Hindmarsh P (1994) Psychosocial assessment of children with short stature: a preliminary report. Acta Paediatr Suppl 406: 11-16.
9. Holmes CS, Karlsson JA, Thompson RG (1985) Social and school competencies in children with short stature: longitudinal patterns. Journal of Developmental & Behavioral Pediatrics 6: 263-267.
10. Rieser PA (1992) Educational, psychologic, and social aspects of short stature. J Pediatr Health Care 6: 325-332.