

The Relationship between Obesity and Fundamental Movement Motor Skills of Girls 6 to 12 Years

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Abstract:

The aim of this study was to determine the relationship between overweight and patterns of displacement fundamental skills of girls 6 to 12 years. Quasi-experimental research methods was conducted in the field. The population of the study consisted of 346 preschool students and primary school students grade one to six in Samen(One of the city in Hamedan province). Cluster sampling methods was used and after data collection and extracted from the body mass index of students, according to the Percentile Chart obese (100-76 percent percentile), 68 samples were selected. Test of Gross Motor Development (TGMD-2) Olrikh (2002) to measure the growth of

fundamental movement skills (running, sliding, galloping, running, skip and hiccup) was used. Data were evaluated for normal distribution of the Kolmogorov-Smirnov test and for the relationship between variables, the Pearson correlation coefficient was used.

The results showed a significant association between obesity and there was no running improvement movement patterns ($p = .81$). Also, a significant association was found between obesity and improvement movement patterns Slipping ($p = .28$). The bouncer also significantly associated with obesity and improvement there was a movement pattern ($p = .15$). However, the association between obesity and movement patterns hiccups improvement run, gallop and jump was observed ($p = .001$).

Key words: fundamental skills, obesity, girls

Introduction

Growth and development in environmental conditions that occur due to intrinsic factors. Motor development and progressive changes throughout life. These changes the interaction between task demands, is the biological characteristics and environmental conditions (1) are the main elements of fundamental motor skills (2). Fundamental movement skills displacement, skinning, which has seen strong growth constitute athletic skills. These skills not only athletic performance, but also affect on people's daily movements. Occurrence of basic skills, especially early season in the growing children. Therefore we should pay special attention to pre-school and school. Failure to achieve progress in these skills, not only in the development of later skills but the skills will follow at a later age. High quality and how these skills in shape, form and structure of the body, including measures that have long been of interest to researchers in physical development (3). Since the human body is divided into three categories: endomorph, mesomorph and ectomorph body

type. This divide is the importance of having the right skills to perform better in sports especially in childhood, which is a fundamental skill formation has long been of interest to researchers. Lawrence and colleagues (2010) believe that early childhood (3-10 years) period of growth in terms of motor skills is critical. Factors such as weight and body fat percentage can be increased to achieve delayed motor skills (4). Thus, obesity is an indicator of two important factors increase a person's height and weight can be effective processes and physical motor development. Hardy et al (2012) research on the prevalence and association as sufficient basic motor skills in children. The study reported that obese children have less movement than normal dominance.

They stated that the development of basic motor skills largely depends on the level of motor activity in children and adolescents (5). Dale et al (2011) in his research concluded that children who are obese generally less mastered their basic motor skills. Basic motor skills that are most affected by obesity and overweight handling basic motor skills such as running, sliding, galloping, and are hip (6). Cliff and colleagues (2011) in the study entitled mastering motor skills in a clinical sample of overweight and obesity children concluded that performance and motor development in children with normal weight better than overweight and obese children (7). Despite much research in the communication of the various factors associated with the development of motor skills but the relationship of obesity and growth patterns of fundamental movement skills (running, sliding, galloping, running, skip and hiccup) not clearly investigated. The researchers in this study sought to determine the relationship between obesity and listed on girls 6 to 12 years.

Materials and Methods

Because researchers plans to find relationship between obesity and fundamental movement patterns (running, sliding, galloping, running, skip and hiccup) 12-6 year-old girls to consider, type of quasi-experimental research comparison method was used. The statistical community consists of 346 preschool and schoolgrade one to six girls students of the Samen primary school. 68 samples extracted from the body mass index of students, according to the Percentile Chart obese (100-76 percent percentile) were used. Test of Gross Motor Development (TGMD-2) Olrikh (2002) measures the child's fundamental movement patterns and growth-oriented process (14) and also measure growth select displacement motor. All subjects during the performance of motor skills using three video cameras and three angles back, face and flank, were filmed simultaneously. The model performance was evaluated by several criteria. The content of each criterion advanced template pattern implementation in practice of the limbs and trunk. The subjects were asked to run the model twice. After each run (criterion function) the perfect score (1) or score (0) was given. (8). Kolmogorov-Smirnov test to check for normal distribution of data and for the relationship between variables, the Pearson correlation coefficient was used.

Results

The results showed a significant association between obesity and there was no running improvement movement patterns ($p = .81$). Also, a significant association was found between obesity and improvement movement patterns Slipping ($p = .28$). The bouncer also significantly associated with overweight and improvement there was a movement pattern ($p = .15$). However, the association between overweight and movement patterns

hiccups improvement run, gallop and jump was observed ($p = .001$).



Figure 1. Performance in basic skills (running, slipping and spring)

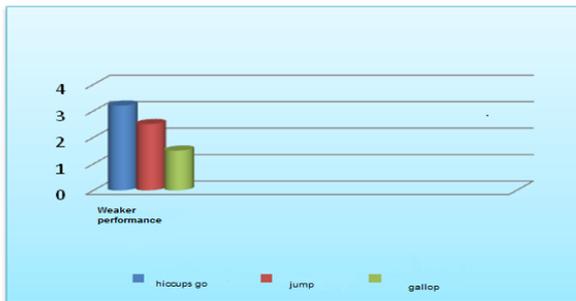


Figure 2. Weaker performance in basic skills (hiccups go, jump and gallop)

Discussion and conclusions

The results of this study showed a significant association between overweight and hiccups improvement movement patterns, gallop and jump there. One possible reason could be associated with this movement pattern hiccups and galloping to the top requires a neuromuscular coordination. As noted, research cited in obese people is poor neuromuscular coordination. In this line of research, Vittori et al (2011) noted a correlation between childhood overweight and motor coordination. They concluded that an inverse relationship between motor coordination and overweight in early childhood. Overweight and obese boys and girls had fewer than normal

group of poor coordination (9). So overweight can cause debilitating to display movement patterns, and galloping rise to the hiccups. This finding is also consistent with the results of Hardy et al (2012) research on the prevalence and association as sufficient Basic motor skills in children. They reported: Obese children have less movement than normal controls dominating. They have basic motor skills largely depends on the level of motor activity in children and adolescents (10). Excessive motor activity levels in obese children than normal-weight children. The reason for this difference is that the movement patterns of overweight such as perceptual motor coordination problems leads to (11). This can have a negative effect on the development of basic motor skills. Another result was that a significant relationship between overweight and hip dislocation slipping and running improvement movement patterns were observed. This achievement resulted Vertinak et al (2011) were aligned. They study how the relation between BMI and gross motor skills review concluded that there is no linear relationship between gross motor skills and overweight (12). But opposite results shown by Murano and colleagues (2011) . They investigate the fundamental patterns in obese and normal weight preschool children were examined. Concluded that obese children in terms of movement patterns, performance was poorer than children of normal weight. Also probably because it is contrary to the results of this study are to apply Natural schools. However, subjects in clinical Murano (the doctor) have been used. On the other hand the results obtained in this section can be used to test this research. Studies have not confirmed this association may be used to test such oseretsky. Also gestures, sliding up and running due to the need of support comes more into balance. Therefore, obese people than any other movement skills in these three skills were relatively better performance than other skills so Dale & Associates (2011) reached this conclusion. They generally children (boys) who are obese are less dominated by their

fundamental motor skills. Basic motor skills that obesity and overweight are the most affected by displacement motor skills such as running, sliding, galloping, and hip. (13). Could be the result of differences in the two studies could be attributed to gender. However, it can be noted that the negative association between overweight and motor skills fundamental to mechanical stress, cognitive, motor parts, body mass transportation, coordination and range of motion is dependent components. Generally based on previous findings, obese children may suffer from motion perceptual disorders. It takes sensory information and motor control, motor behavior they exhibit weaker Explain the causal effect of BMI and fundamental movement patterns cannot be determined in this study with the target population was limited to but more research to clarify the relationship between overweight and growth factors motion is carried. On the other hand, cross-sectional study in a much better place that put the long-term research. Therefore, the design of appropriate educational programs in schools can be an opportunity to practice basic skills that are the foundation of professional skills and sports for children provided.

Suggestions:

1. The strengthening of fundamental movement patterns suggests that the physical education curriculum in schools purposefully seek strategies to reduce overweight students. Subsequent higher aerobic fitness and wellness.

2. Play is a very important tool for the development of basic skills and life skills in young children.

Therefore physical education field by trainers and group activities using a variety of games and creative children to motivate and reward. It frustration with the inability of children (obesity) in the exercise of skill and enjoy the game to avoid. Well as the activity is weight loss.

3. Parents of overweight children and physical education, children, comprehensive information and education through their business.

4. It is recommended that parents bring their kids to sit together with computer games, which can be a cause of obesity and sedentary lifestyle are prohibited.

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