BİRUNİ UNIVERSITY

"Future of Science"

I.BİRUNİ INTERNATIONAL HEALTH SCIENCES CONGRESS

"Well-Being and Health"

23th and 24th of May 2025 09:00 Biruni University

For detailed information

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

17 PARTNERSHIPS FOR THE GOALS

contribute to increased workplace productivity and employee satisfaction.

Keywords: Coping Strategies, Job Performance, Occupational Balance, Private Sector

OP76

Depression, Anxiety, and Occupational Balance in Caregivers of Children with Autism Spectrum Disorder and Typically Developing Children

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Purpose: Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by challenges in social interaction, communication difficulties, and repetitive behaviors. Caregivers of children with ASD often experience heightened levels of stress and depression due to the demanding nature of caregiving, resulting in limited personal time and disruption of daily activities. Maintaining an occupational balance is essential for health and well-being. This study aimed to compare the levels of depression and anxiety, as well as their association with occupational balance, among caregivers of children with ASD and typically developing (TD) children.

Methods: The study included primary caregivers of children aged 3-17 years, diagnosed either with ASD or identified as TD. Exclusion criteria included the presence of additional diagnoses in the child with ASD or the caregiver having another dependent with a chronic illness. The research was conducted at the Family, Women Support, and Disability Center (AKDEM), with data collected through both online and face-to-face interviews. Data analysis was performed using SPSS 23.0. Assessment tools included the Sociodemographic Questionnaire, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), the Turkish version of the Validity and Reliability of the Turkish Occupational Balance Questionnaire (OBQ11 - T), and the Canadian Occupational Performance Measure (COPM).

Results: Caregivers of children with ASD demonstrated significantly higher levels of depression ($p < 0.001$) and anxiety ($p < 0.050$) compared to caregivers of TD children.

A significant relationship was identified between depression and occupational balance among caregivers of children with ASD ($p<0.050$). However, no significant relationship was observed between occupational balance and anxiety in either group ($p > 0.05$). In caregivers of TD children, occupational balance showed a significant association with depression ($p < 0.001$).

Conclusion: The findings indicate that the high levels of depression observed in caregivers of children with ASD are linked to challenges in maintaining an activity-role balance, possibly due to the intensive nature of caregiving. In contrast, anxiety levels did not correlate with activity-role balance, suggesting the influence of additional factors. Despite the study's limited sample size, it provides a comparative analysis that highlights the need for targeted support programs for caregivers. Future research should include larger samples and explore interventions to improve caregivers' well-being.

Keywords: Anxiety, Autism Spectrum Disorder, Caregivers, Depression, Occupational Balance

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Development and Testing of a New Body Mass Index

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Purpose: Widely used Body Mass Index ($BMI=m/h^2$) or its variant Tri-ponderal Mass Index ($TMI=m/h^3$) or other similar measures of defining fitness levels have been demonstrated to be unsatisfactory in many aspects. A new index inclusive of all ages, body sizes, and sexes is needed. This study proposes a new index termed Consistent Body Mass Index ($CBMI=\sqrt{m/h^3}$), which is in agreement with waist-to-height ratio, a key parameter identifying body fitness level. The newly developed index is non-dimensional, applicable to all ages, body sizes, and sexes. Furthermore, it can be used as an estimator for ideal body weight $m = (CBMI)^2h^3$ for a decided CBMI value and a given height.

Methods: A new body mass index, named Consistent Body Mass Index $CBMI=\sqrt{m/h^3}$, is developed from first principles to classify the fitness level of a person according to the mass and height. The new index is non-dimensional hence scalable, well correlated with waist-to-height ratio, w/h, and valid for adults, children, and even infants of both sexes. Correlation levels of the CBMI and TMI against waist-to-height ratio w/h are tested for subgroups and entire participants ranging from 1-day-old to 75-year-old males and females. Tentative classification levels for both w/h and CBMI indexes are proposed according to the statistical values of total samples.

Results: Correlation coefficient computed the complete data set for waist-to-height ratio w/h versus CBMI is very satisfactory $r=0.84$ in comparison with the uncorrelated result of TMI, which is the non-dimensional form of the standard BMI. Two

new classification charts, based on w/h and CBMI indexes, are presented for determining the fitness levels.

Conclusion: The new body mass index CBMI, which correlates well with waist-to-height ratio w/h, is regarded as a reliable measure of fitness level. Waist-to-height ratio w/h or CBMI can be used with equal confidence as an accurate and reliable estimator thus providing a quantitative value for assessing health risks associated with underweight or overweight body states for all ages and sizes. Finally, ideal body weight can be estimated from the index as $m=(CBMI)^2h^3$ for a definite CBMI value and height h.

Keywords: Anthropometry, Body Mass Index, Body Weight, Waist-Height Ratio, Public Health