

# Relation of Screen-Time (Phone-Computer-TV-Online Games) and Physical Activity with Childhood Obesity

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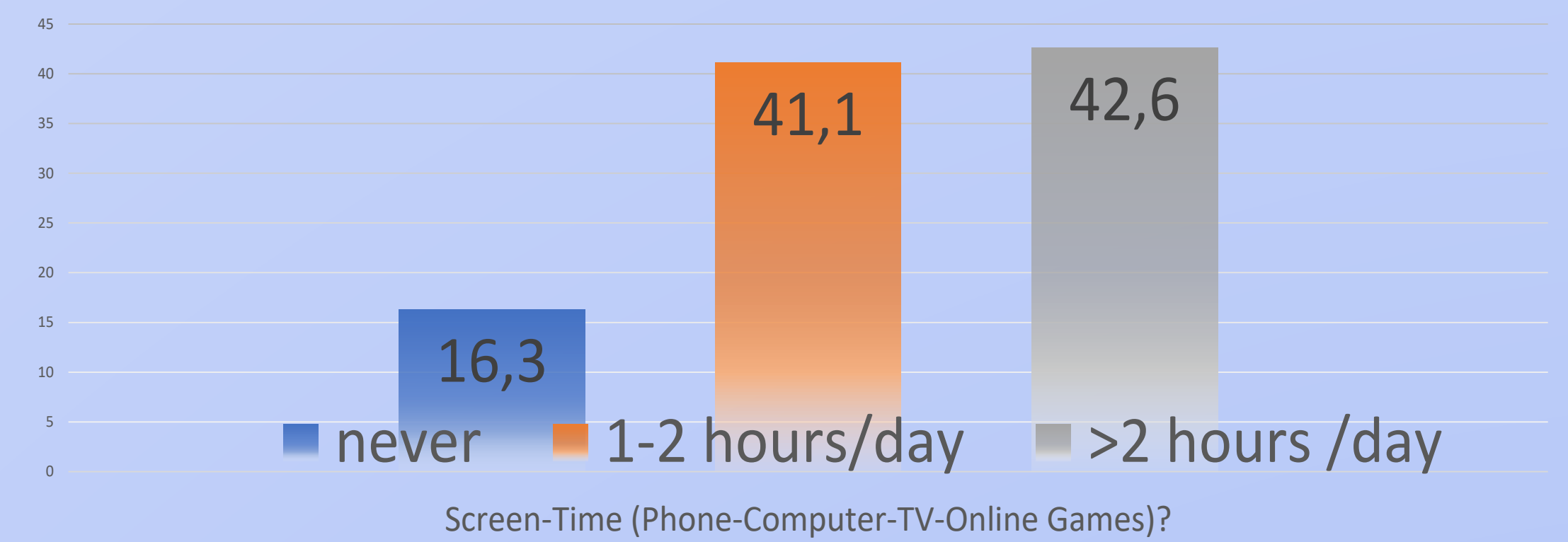
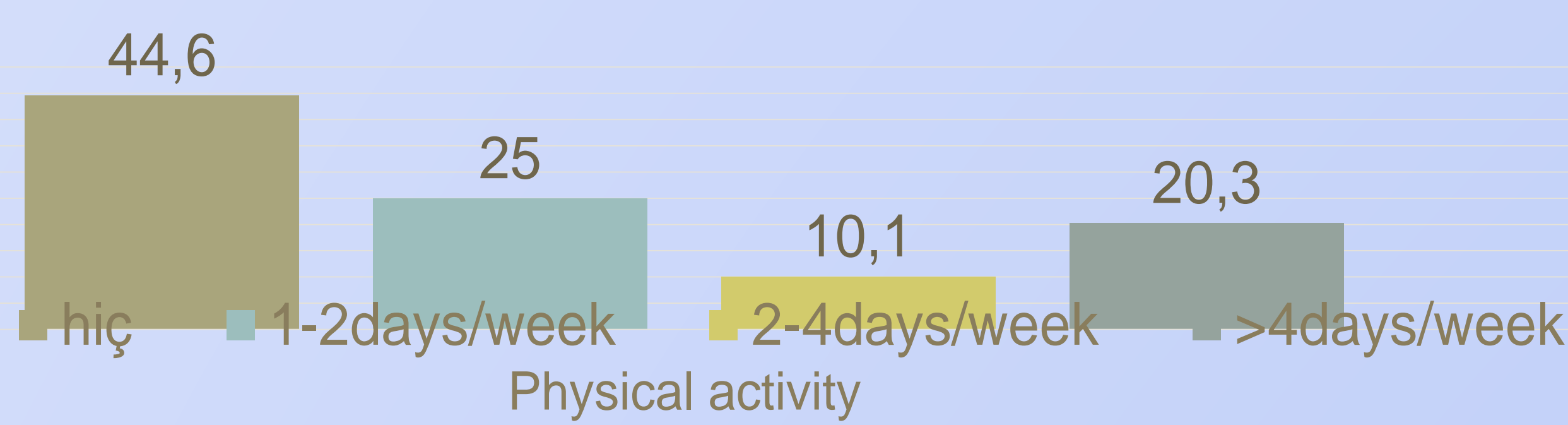
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**Objective:** Sedentary lifestyle obviously increases the risk of obesity. Reduced physical activity and increased screen-time seem to act as major determinants of the rapid increase of childhood obesity. Prevention of obesity is easier and more practical in comparison with treatment of obesity and its complications. Treatment of childhood obesity not only carries positive biopsychosocial consequences for the child but also serves as an important public health issue by preventing complications which would emerge into adulthood. For this reason, we aimed to determine the relation of screen-time and physical activity with childhood obesity.

**Method:** This prospective cohort study was conducted in the pediatric primary care clinic of Ankara University School of Medicine between July 2017–November 2017. The children, aged between 6-18 years, without any underlying chronic disease and previous use of medications which increase the risk of obesity were included to study. A survey instrument was handed to families for the determination of daily physical activity and screen-time. Anthropometric values were calculated. Overweight (BMI>85%P) and obese (BMI>95%P) children were identified. Data were evaluated by appropriate statistical methods.

**Results:** A total of 1949 children [1124 female, 826 male] with a mean age of 11.1±3.8 years were evaluated. The 41.1% of families signified that their children spent 1–2 hours and 42.6% denoted >2 hours of screen-time a day while 16.3% reported no screen-time. Obesity was detected in 12.6% of those who did not mention any screen-time whereas in 26.1% of those who spent >2 hours a day (P <0.05). Physical activity findings revealed no participation in sports in 44.6%, 2 days/week in 25%, 3-4 days/week in 10.1% and >4 days/week in 20.3% of all children. The frequency of obesity was determined as 22% in children reported no exercise at all, and 11.2% in those who stated >4 days/week of exercise (P <0.05).



## Correlation between physical activity and obesity

| Physical activity? |   | n     | Obesity |            |        | Total |
|--------------------|---|-------|---------|------------|--------|-------|
|                    |   |       | Others  | Overweight | Obese  |       |
| Never              | n | 548   | 127     | 190        | 865    |       |
|                    | % | 63,4% | 14,7%   | 22,0%      | 100,0% |       |
| 2days/week         | n | 340   | 63      | 82         | 485    |       |
|                    | % | 70,1% | 13,0%   | 16,9%      | 100,0% |       |
| 3-4days/week       | n | 145   | 19      | 32         | 196    |       |
|                    | % | 74,0% | 9,7%    | 16,3%      | 100,0% |       |
| >4days/week        | n | 316   | 34      | 44         | 394    |       |
|                    | % | 80,2% | 8,6%    | 11,2%      | 100,0% |       |
| Total              | n | 1349  | 243     | 348        | 1940   |       |
|                    | % | 69,5% | 12,5%   | 17,9%      | 100,0% |       |

## Correlation between screen-time and obesity

| Screen-Time (Phone-Computer-TV-Online Games)? |   | n     | Obesity |            |        | Total |
|---|---|-------|---------|------------|--------|-------|
|   |   |       | Others  | Overweight | Obese  |       |
| Never   | n | 242   | 35      | 40         | 317    |       |
|   | % | 76,3% | 11,0%   | 12,6%      | 100,0% |       |
| 1-2 hours/day                                 | n | 612   | 91      | 92         | 795    |       |
|   | % | 77,0% | 11,4%   | 11,6%      | 100,0% |       |
| >2 hours/day                                  | n | 493   | 116     | 215        | 824    |       |
|   | % | 59,8% | 14,1%   | 26,1%      | 100,0% |       |
| Total   | n | 1347  | 242     | 347        | 1936   |       |
|   | % | 69,6% | 12,5%   | 17,9%      | 100,0% |       |

**Conclusion:** As compatible with previous research, this study showed that sedentary lifestyle serves as a serious risk for obesity. We observed that the risk of obesity increased with more daily screen-time. For this reason, we believe that physical activity starting from the family environment should be encouraged together with restriction of daily screentime. In fact, increasing participation of social and physical activities is an effective measure to reduce screen-time. We suggest sufficient maintenance of playgrounds in school as well as public areas, more sports facilities and replication of jogging tracks.

**Key words:** childhood obesity, physical activity, prevention of obesity, screen-time.

