Factors Associated with Body Image Concerns among Australian Male and Female Children in the Transition from Primary to

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Introduction: There is a lack of longitudinal studies assessing eating behaviours and body image concerns during the transition from primary to secondary school (Vocks, Legenbauer, & Heil, 2007). **Aims:** This study explored body image and perceptions of weight, body self-esteem, nutrition knowledge scores and consumption of breakfast and other eating patterns of Australians students in transition from primary school (year 6, the equivalent ages between 11 and 13 years old) to secondary school (years 7, equivalent to between 12 and 13 years). This age group was chosen to be crucial for the development of puberty in the majority of individuals and for representing a period of change in school environment and level of responsibility in the Australian school curriculum. **Methods:** The Food, Health and Sports Survey (O'Dea, 2008; O'Dea & Wilson, 2006) questionnaire together with the Stunkard Figure Scale (Stunkard, Sorenson & Schlusinger, 1983) was administered as a self report survey and completed anonymously by students during class time under the supervision of the research team. Both were completed by 300 students from 16 Catholic schools in the state of New South Wales, Sydney, Australia in 2007 and reapplied in 2008. Trained research assistants including the Master of Education candidate (Timerman) were involved in data collection and they measured height and weight of participants in a private school location in light school uniform, without shoes. Students who agreed to participate and provided signed consent in 2007 and 2008 completed the questionnaire and had their height and weight measured by the research team. The study design and protocol were approved by the University of Sydney Human Ethics Committee (reference number: 06 – 2004/7453). **Results:** The results are presented in three sections: Section 1 – Cross-sectional analyses of 170 participants at year 6 and 130 different participants in year 7 in 2008; Section 2

- Compare gender differences in each year; Section 3 – Longitudinal analyse of a cohort (130) while they were in year 6 in 2007 and after the transition to year 7 in 2008. In general the results showed that more than half of female participants would like to be lighter, especially after the transition to year 7 (51.4% of participants in the cross-sectional sample), but already have that desire in year 6 (50.0% of participants in the longitudinal sample). The significant results of section 1 (cross-sectional) and 3 (longitudinal) after the transition to year 7 were: lower self-esteem rate among girls, both from section 1 (year 6 M = 7.10 ± 1.63, n = 71 and year 7 M = 7.62 ± 1.65, n = 85, respectively, $p < .05$) and section 3 (n = 71) (year 6 M = 7.73 ± 1.62, and year 7 M = 7.10 ± 1.63, t = 3.59, $p < .05$); reduction in breakfast score among boys of section 1 (year 6 M = 7.39 ± 1.54, n = 85 and year 7 M = 6.85 ± 2.33, n = 59, F = 4.30, $p < .05$) and among girls (n = 71) of section 3 (year 6 M = 6.85 and year 7 M = 6.15, t = 1.98, $p < .05$); reduction in score of "how you think your father thinks you look" among the boys of section 1 (year 6 M = 9.28 ± 1.05, n = 85 and year 7 M = 8.59 ± 1.71, n = 59, F = 4.24, $p < .05$) and increase of nutrition knowledge among boys (n = 59) of section 3 (year 6 M = 56.14 ± 21.77 and year 7 M = 65.68 ± 19.28, t = - 2.99, $p < .01$). The summary of the significant differences between boys (n = 85) and girls (n = 85) of section 2 at Year 6 in 2008 were: diet to gain weight among boys and diet to lose weight among girls (χ^2 = 9.29, $p < .05$); lower score of " How you think the opposite sex think you look" among girls (boys M = 6.97 ± 1.78 and girls M = 6.25 ± 2.33, F = 4.92 , $p <$ .05); higher breakfast score among boys (boys M = 7.39 ± 1.54 and girls M = 6.15 ± 2.58, F = 13.99, $p < .001$) and higher rate of skipping breakfast among girls (boys = 1.2% and girls = 8.2%, χ^2 = 4.72, $p < .05$). Regarding the Stunkard figure scale, several differences were found between boys and girls of section 2. There was a choice of bigger ideal figure among boys compared to girls (M = 3.78 ± 0.74 and M = 2.95 ± 1.03, respectively, F = 33.4, $p < .001$). In addition, the boys chose larger figures as ideal for both men (boy M = 3.82 ± 0.88 and girls M = 3.34 ± 1.07, respectively, F = 9.16, $p < .01$), and women (boys M = 3.37 ± 0.83 and girls M = 2.99 ± 1.07, respectively, F = 6.63, $p < .05$). Girls had greater discrepancy and therefore a greater body dissatisfaction, indicating that their ideal figure was significantly lower than their current perception of body image (girls M = 0.78 ± 1.57 and boys M = 0.12 ± 0.86, respectively, F = 10.4, p

< .01). The significant differences between boys (n = 59) and girls (n = 71) of year 7 in 2008 were: higher incidence of boys wishing to weigh a little more (boys = 22.0% and girls = 8.6%, χ^2 = 10.11, p < .05); lower score among boys about "How you think your father thinks you look" than girls (M = 8.60 ± 1.71 and M = 9.17 ± 1.85, respectively, F = 4.55, p < .05). On the other hand boys had higher scores on "how they think the opposite sex thinks they look" (boys M = 6.94 ± 1.88 and girls M = 6.06 ± 2.03, F = 6.43, p < .05). The differences regarding the Stunkard figure scale remained evident among boys and girls of year 7. The girls chose an ideal body image significantly lower than boys (M = 3.02 ± 0.89 and M = 3.64 ± 0.82, F = 16.99, p < .001) and they also chose smaller ideal male figure compared to boys (M = 3.16 ± 0.95 and M = 3.59 ± 0.93, respectively, F = 6.78, p < .01). **Conclusion:** The results of this study suggest an urgent need for measures to prevent physical and psychological risks associated with body image problems (Atlantis & Ball, 2008) and low self-esteem (Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006; O'Dea, 2007) occurring among children and adolescents. The prevention of disorders related to food and body during adolescence has its roots in the primary school years, as shown in this study where many of the children already showed dissatisfaction with body image, low self-esteem and dieting behaviours since year 6.

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