Canadian Research on Eating Disorders

Prepared by the Ontario Community Outreach Program for Eating Disorders (2011) www.ocoped.ca

Updated by the National Initiative for Eating Disorders (2017) www.nied.ca

Eating Disorders

Research indicates that the prevalence rate of eating disorders is between 2% and 3%. Based on Statistics Canada population data (Statistics Canada 2016), an estimated 725,800 and 1,088,700 Canadians will meet the diagnostic criteria for an eating disorder.

An **Ontario** community-based study of 8,116 individuals aged 15 of 65 years across 42 health units revealed:

- Lifetime prevalence of bulimia nervosa (BN) was found to be 1.1% for females (1.22 % when including respondents who lacked frequency criterion) and 0.1% for males (0.38% (when including respondents who lacked frequency criterion) (Garfinkel et al., 1995; 1996).
- Among the female respondents, 2.0% were classified as meeting full or partial-syndrome criteria for AN.
- 0.56% met criteria for lifetime full-syndrome AN and 1.4% for partial syndrome AN.
- Of the latter group, 1.0% of the sample lacked only the amenorrhea criterion.

An **Ontario** study of 9,953 (aged 15-65) drawn from a community epidemiologic survey - mental health supplement to the Ontario health survey (face-to-face interviews) revealed:

- Lifetime prevalence of AN was found to be 0.16% for males and females 0.66% (Woodside et al., 2001).
- Lifetime prevalence of BN was found to be 0.13% for males and females 1.46%.
- Prevalence of full or partial ED was 2.0% for males compared to 4.8% for females (Full syndrome ED: 0.3% men, 2.1% women)

A **Quebec** study of 1,310 women aged 20-40 years - recruited using random-digit dialing to participate in a 20-min telephone - between November 2002 and May 2003 revealed:

- 0.2% met criteria for BN (purge subtype) and 0.4% for BN (non-purge subtype) based on point prevalence data (Gauvin et al., 2009).
- A total of 0.6% met criteria for BN.
- The prevalence of binging at clinical levels was 4.1%.

NIED
NATIONAL INITIATIVE FOR EATING DISORDERS
www.nied.ca
Awareness. Understanding. Action.

Canadian Research on Eating Disorders

A **Canada wide** surveillance study of 2453 pediatricians (a 95% participation rate) during a 2-year period (March 1, 2003, and February 28, 2005) Pinhas, 2011) revealed:

- The incidence of early-onset restrictive EDs in children aged 5 to 12 years seen by pediatricians was 2.6 cases per 100 000 person years. (161 children younger than 13 years - ratio of girls to boys was 6:1 (138 girls and 22 boys) with 1 case not specifying sex.
- The incidence of EDs in this 5 to 12 year age range of children is 2-4 times greater than that of Type 2 Diabetes in children and youth across all ages up to the age of 18 years
- Of those who were identified as having an ED , 62.1% of children met criteria for Anorexia Nervosa.
- Although children with anorexia nervosa were more likely to be medically compromised, some children who did not meet criteria for anorexia nervosa were equally medically unstable
- The highest incidence was 9.4 cases per 100 000 person years, observed in girls aged 10 to 12 years,
- The incidence in boys aged 10 to 12 years was 1.3 cases per 100 000 person-years.

Disordered Eating

A **Southern Ontario** study with a community (non-clinical) sample of 1,739 teens revealed:

- Significant symptoms of eating disorders, reflected in EAT-26 scores of above 20 and bingeing or purging, or both, were reported by 27% of girls aged 12–18 years (Jones et al., 2001).
- Respondents who were currently on a diet were 3.3 times more likely to report binge eating than girls who were not dieting and were 5.7 times more likely to report purging.
- Only 1.6% of the total sample reported having ever received an evaluation or treatment, or both, for disordered eating attitudes or behaviours, or both.
- Furthermore, only 4% of the girls who reported current binge eating and 6% of girls who were purging had ever received any assessment or treatment for these problems.

Canadian Research on Eating Disorders

Restrictive Dieting (Dieting to Lose Weight)

A **Southern Ontario** series of studies with a community sample of approximately 2,000 students revealed:

- 30% of females and 25% of males between the ages of 10 and 14 years of age reported dieting to lose weight (McVey et al., 2004; 2005). The majority of the sample was within a healthy weight range according to body mass index (BMI).

A **Manitoba** community-based study of 565 boys and girls (10-11 years of age) revealed:

- 12% of both boys and girls reported dieting in the past year to lose weight (Bernier et al., 2010). Of the children who reported dieting, 35% said they had done so for a few months or longer in the past year, and 32% described their dieting as somewhat to extremely strict. Girls more often reported that their friends had changed their diet in the past year to lose weight (15% versus 7%, $p=0.001$).
- Approximately 25% of children 10-11 years of age reported receiving frequent weight-related advice (Bernier et al., 2010). Girls did not report this more often than did boys. Children in the lowest BMI percentile desired the greatest change in body shape and had the highest Restraint Scale scores.
- About 30% of the children reported they had been teased about being too heavy, while 14% reported they had been teased about being too thin.

A **Halifax, Nova Scotia** community-based sample of 247 girls and boys in grades 6, 7 and 8 revealed:

- Current attempts to lose weight were highest in grade 8 girls (41% of girls and 9% of boys) compared with grade 6 (14% of girls and 24% of boys) and grade 7 (21% of girls and 13% of boys) children. (Gusella et al., 2008).
- Of those trying to lose weight, 71.4% were in the average range for weight and height, 12.2% were overweight and 16.3% were obese.
- As females progress through grades 6 to 8, there is a significant drop in self-esteem scores compared with male youths ($P<0.05$).
- 8.5% of the children fell in the high-risk group for disordered eating (ChEAT score 20 or higher) - 19 were girls and two were boys ($P<0.01$).
- Those in the high-risk group were significantly more likely to fear being overweight (90%), to have tried to lose weight in the past (81%), to be currently trying to lose weight (76%), and to have engaged in binge eating (38%) and self-induced vomiting (24%).
- High-risk group were more likely to have lower self-esteem than youth in the low-risk group ($P<0.01$)

Canadian Research on Eating Disorders

A survey of 29,440 adolescent students in 50 school districts across **British Columbia** (McCreary Society Centre; Smith et al, 2009) revealed:

- By the age of 18 years, 80% of girls of normal height and weight reported that they would like to weigh less
- Dieting among females dropped from 49% in 2003 to 46% in 2008.
- Proportion of youth reporting binge eating decreased from 1998 to 2003 (from 23% to 18% for males and from 41% to 36% for females) but in 2008 remained much the same as 2003.
- Males reporting vomiting on purpose after eating (dropped from 5% in 1998 to 3% in 2003 and 2008).
- Rates of vomiting on purpose after eating did not change among females.

Morbidity and Mortality Studies

As described by Pinhas et al., (2011), very little quantitative information exists on the outcomes or co-morbid diagnoses of Canadian ED patients.

The large Ontario Mental Health Survey (Garfinkel et al., 1995; Woodside et al., 1996) provided information on co-morbidity in eating disorders where 34% of women and 15% of men with an eating disorder had a lifetime diagnosis of major depression; 37% of men and 51% of women had a lifetime diagnosis of anxiety disorders and 45% of men and 21% of women had a lifetime diagnosis of alcohol dependence.

In a cohort study of cases from the only adult tertiary care ED program in British Columbia (954 consecutive patients referred to the only adult tertiary care eating disorders program), the standardized mortality ratio for AN was 10.5 (Birmingham et al., 2005) with a life expectancy reduction of 20-25 yrs (Harbottle et al., 2008).

Eating Disorder Training in Canadian Medical Schools

- 70% of doctors receive 5 hours or less of eating disorder-specific training while in medical school (Girz, Lafrance Robsinson, & Tessier, 2014)
- In 2004, only 6.3% of psychiatry residents felt they had spent enough time with ED patients to work effectively with them in clinical practice (Williams & Leichner, 2006)

Canadian Research on Eating Disorders

The Cost of Treating Eating Disorders

- While financial data is not available in Canada on a national scale, a study conducted in British Columbia in 2003 reported the provincial costs of those with anorexia nervosa on long-term disability may be as high at $101.7 million/year, up to 30 times the cost of all tertiary care services for eating disorder treatment in the province (Su & Birmingham, 2003)
- There are hidden costs associated with eating disorders, including lost earnings of sufferers and carers (Pricewaterhouse Coopers, 2015)

References

Birmingham, C.L., Su, J., Hlynsky, J.A., Goldner, E.M. & Gao, M. (2005). The mortality rate from anorexia nervosa. *International Journal of Eating Disorders, 38(*2),143-6.

Colton, P.A., Olmsted, M.P. & Rodin, G.M. (2007). Eating disturbances in a school population of preteen girls: assessment and screening. *International Journal of Eating Disorders, 40(*5), 435-40.

Gauvin, L., Steiger, H. & Brodeur, J.M. (2009). Eating-disorder symptoms and syndromes in a sample of urban-dwelling Canadian women: contributions toward a population health perspective. *International Journal of Eating Disorders, 42*(2),158-65.

Garfinkel, P.E., Lin, E., Goering, P., Spegg, C., Goldbloom, D.S., Kennedy, S., et al. (1996). Purging and nonpurging forms of bulimia nervosa in a community sample. *International Journal of Eating Disorders, 20*(3), 231-8.

Girz, L., Lafrance Robinson, A. & Tessier, C. (2014). Is the next generation of physicians adequately prepared to diagnose and treat eating disorders in children and adolescents*? Eating Disorders: Journal of Treatment & Prevention, 22*(5), 375-85.

Gusella, J., Goodwin, J., van Roosmalen, E. (2008). 'I want to lose weight': Early risk for disordered eating? *Paediatric Child Health, 13*(2), 105-110.

Harbottle, E.J., Birmingham, C.L., Sayani, F. (2008). Anorexia nervosa: A survival analysis. *Eating and Weight Disorders, 13*(2), e32-4.

Canadian Research on Eating Disorders

Jones, J.M., Bennett, S., Olmsted, M.P., Lawson, M.L., Rodin, G. (2001). Disordered eating attitudes and behaviours in teenage girls: a school-based study. *CMAJ Canadian Medical Association Journal, 165*(5), 547-52.

McVey, G., Tweed, S. & Blackmore, E. (2004). Dieting among preadolescent and young adolescent females. *CMAJ Canadian Medical Association Journal, 170*(10), 1559-61.

McVey, G.L., Tweed, S., & Blackmore, E. (2005). Correlates of dieting and muscle gaining behaviors in 10-14 year-old males and females. *Preventive Medicine, 40*(1), 1-9.

Pinhas, L., Morris, A, Crosby, R.D., & Katzman, D.K. (2011). Incidence and age-specific presentation of restrictive eating disorders in children. A Canadian paediatric surveillance program study. *Archives of Pediatric and Adolescent Medicine, 165*(10), 895-899

Piran, N. & Gadalla, T. (2007). Eating disorders and substance abuse in Canadian women: a national study. *Addiction, 102*(1),105-13.

Pricewaterhouse Coopers (2015). The costs of eating disorders Social, health and economic impacts. http://www.pwc.co.uk/services/economics-policy/insights/the-costs-of-eating-disorders-social-health-and-economic-impacts.html

Su, J.C. & Birmingham, C.L. (2003). Anorexia nervosa: The cost of long-term disability. *Eating and Weight Disorders 8*(1), 76-9.

Williams, M. & Leichner, P. (2006). More training needed in eating disorders: A time cohort comparison of Canadian psychiatry residents. *Eating Disorders: Journal of Treatment & Prevention*, *14*(4), 323-34.

Woodside, D.B., Garfinkel, P.E., Lin, E., Goering, P., Kaplan, A.S., Goldbloom, D.S., et al. (2001). Comparisons of men with full or partial eating disorders, men without eating disorders, and women with eating disorders in the community. *American Journal of Psychiatry, 158*(4), 570-4.

NIED
NATIONAL INITIATIVE FOR EATING DISORDERS
www.nied.ca

Awareness. Understanding. Action.