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Similarities and differences between women and men on eating disorder risk factors and symptom measures

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Abstract

Researchers studying eating disorders in men often use eating disorder risk and symptom measures that have been validated only on women. Using a sample of 215 college women and 214 college men, we report on the validity of doing so with a set of measures chosen to reflect a wide range of risk factors and symptoms. The Bulimia Test-revised (BULIT-R), the restraint scale (RS), the three-factor eating questionnaire (TFEQ), the Eating Expectancy Inventory, and the eating attitudes test (EAT) all had the same factor structures for both genders, and tests of invariance showed that factor loadings, factor variances, and intercorrelations among factors were equivalent across gender. A modified Structured Clinical Interview for DSM-IV anorexic symptoms questionnaire did not perform adequately for either gender. Men produced slightly less reliable scores on virtually all measures, with the result that Pearson-based estimates of correlations among the measures were slightly lower for men. Men had lower scores on symptom and risk measures, but not on other eating measures.

Keywords: Eating disorder; Risk factors; Symptom measures

1. Introduction

Researchers have recently begun to focus on eating disorders in men. Estimates suggest that men experience these disorders less often than women do: Men comprise approximately 5–10% of the anorexia population (Lucas, Beard, Kruland, & O'Fallon, 1991) and, perhaps, 10–15% of the bulimia population (Carlat & Carmago, 1991). To date, it appears that the most common forms of symptom expression in men are the classic eating disorders of anorexia nervosa and bulimia nervosa. There has been some recent attention to unique male eating and body dysfunction such as an exaggerated focus on bodybuilding and

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muscle mass. However, of the 113 published studies in the last 4 years on eating disorders in men, 92 focused on the classic eating disorders of anorexia, bulimia, and binge eating disorder, and only 21 concerned the newer, unique male disorders.

Despite this interest in eating disorders among men, we found no studies examining the psychometric properties of eating disorder risk and symptom measures in men and only one study that addressed psychometric issues among adolescent males (Lewinsohn, Seeley, Moerk, & Striegel-Moore, 2002). Frequently, measures developed and validated on women are employed in studies of men, despite the absence of appropriate validity information (Carlat & Carmago, 1991). At present, researchers typically use the measures unmodified for men, apparently because the symptom pictures appear to be comparable across genders (Carlat, Carmago, & Herzog, 1997). The aim of this study is to begin to examine whether the reliability and the validity of eating disorder measures applied to men are comparable with their reliability and validity for women.

To date, we know the following. The restraint scale (RS) has lower internal consistency when completed by men (Klem, Klesges, Bene, & Mellon, 1990). Men have lower mean scores on the eating attitudes test (EAT; Strong, Williamson, Netemeyer, & Geer, 2000) and the three-factor eating questionnaire (TFEQ; Neumark-Sztainer, Sherwood, French, & Jeffery, 1999). Very little work has compared genders on the relationships between risk factors and symptoms: The EAT differentiates males with eating disorders from those without (Garfinkel & Newman, 2001). Otherwise, the only studies we found were one on dieting (French, Jeffery, & Wing, 1994) and one on obligatory running (Slay, Hayaki, Napolitano, & Brownell, 1998). Only one study has compared factor structures across gender: Engelsen and Hagtvet (1999) studied a short form of the EAT, but used no validation criterion.

The present study adds to this literature in the following ways. First, we compared the factor structures of a set of eating-disorder-relevant measures between female and male samples. A prerequisite for using existing measures with men is that the measures have the same factor structure with men as they do with women; otherwise, the meaning of scores is not known. Since most measures were validated on exclusively female samples (RS: Herman & Mack, 1975; the Eating Expectancy Inventory: Hohlstein, Smith, & Atlas, 1998; the BULIT-R: Thelen, Farmer, Wonderlich, & Smith, 1991), or male responses were only used for discriminant validity purposes (EAT: Garner & Garfinkel, 1979), a comparison of factor structures is necessary to determine the suitability of their use with men.

Second, we compared the intercorrelations of the risk and symptom measures. If most risk and symptom measures are less reliable with men, it is important to determine whether any gender differences in correlations are substantive or are due simply to differences in reliability. We compared correlations derived from structural equation modeling (SEM), which removes the random error variance from the measures (Hoyle & Smith, 1994), with the traditional Pearson correlation coefficients, which do not remove random error. If correlation differences are due only to reliability differences, they will not be present when error variance is removed; if there are substantive differences in the correlations as a function of gender, those differences will remain.

Third, we examined mean differences between men and women on both risk and symptom measures. If men simply endorse fewer items, in general, concerning eating and dieting, they should have lower means on all scales. If men's lower endorsement is selective, they should have lower means on demonstrated risk measures, but not on the measures that are not associated with increased risk.

To sample broadly from eating disorder risk and symptom measures, we examined four risk measures and two symptom measures. For risk measures, we chose the RS, the EAT, the TFEQ, and the Eating Expectancy Inventory. These scales measure a range of factors from dieting attempts leading to the