Introduction

When a person abuses a substance he or she displays a processing bias for information in the environment relating to this substance (e.g., Cox, Fadardi, & Pothos, 2006). That is, the person will direct his or her attention towards such information and process it more extensively. Processing bias is important since it may contribute to the maintenance and/or escalation of the addictive behaviour (e.g., Cox, Pothos, & Hosier, 2007). Unlike drugs or alcohol, food is not physically addictive. Nevertheless, like addictive substances, food can be a powerful reinforcer. As such, many individuals overeat and have difficulty limiting their food intake.

Previous research on food-related processing bias (FPB) in non-clinical populations is limited. A well-documented result is that higher levels of restraint (i.e. attempts to limit food intake) are associated with greater FPB. However, the compulsiveness of this finding is reduced by methodological limitations. Most of the studies we identified (e.g., Francis, Stewart, & Hounsell, 1997; Stewart & Samouluk, 1997) have measured restraint using the Restraint Scale; a scale that confounds restraint with disinhibition (i.e. tendency to overeat, Van Strien, 1997). We found only four studies that employed alternative measures of restraint (Braet & Crombez, 2003; Green & Rogers, 1993; Long, Hinton, & Gillespie, 1994; Ogden & Greville, 1993), and of these only one (Green & Rogers, 1993), found a main effect of restraint on FPB. An additional problem with work in this area is that it has been almost exclusively conducted with females from western societies. Given societal pressures on western females to be slim (e.g., Cogan, Bhalla, SefaDedeh, & Rothblum, 1996), it seems likely that women who are more inclined to overeat may also be more likely to attempt to limit their food intake, resulting in correlations between disinhibition and restraint. These limitations raise the question of whether it is restraint that is associated with increased FPB or tendency to overeat.

We sought to address these shortcomings by including in our sample individuals displaying high disinhibition/low restraint and vice versa. This was achieved by recruiting males and females in the UK, Greece and Iran, since there is evidence to indicate that men and non-western women are less subject to pressures to be slim (e.g., Cogan et al., 1996; Wardle et al., 1992). Additionally, we employed the Dutch Eating Behaviour Questionnaire (DEBQ; Van Strien, Frijters, Bergers, & Defares, 1986), which assesses restraint and disinhibition separately. If, as suggested by previous research...