Enhancing dissemination in selective eating disorders prevention: An investigation of voluntary participation among female university students

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ABSTRACT

Maximising dissemination of efficacious psychological interventions is an important undertaking, particularly in prevention work where the target population may not be seeking help. Consequently, the current study investigated voluntary participation in a selective eating disorder prevention programme by examining predictors of, and evaluating a motivational enhancement approach to, increased participation. Female students studying first-year psychology ($N = 124$, $M_{age} = 19.30$, $SD = 1.55$) completed baseline measures, were randomised to a motivational or control condition, then presented with a flyer for an eating disorders prevention trial and assessed regarding potential participation. Results showed that interest and likelihood of participation were low overall and lack of time the most commonly endorsed reason. Participants high on weight concerns were more likely to cite the group format of the intervention as a deterrent. A greater belief in the helpfulness of body image programmes and higher personal ineffectiveness were significant predictors of interest in participation. There was no significant difference between those who did and did not undergo the motivational enhancement with respect to interest and likelihood of participation. These findings suggest important avenues for consideration when designing eating disorder prevention efforts relying on voluntary participation, and highlight the importance of evaluating programmes cross-culturally.

Eating disorders are associated with a number of serious and often debilitating impacts on physical and mental health (Crow et al., 2009). Sub-threshold disorders similarly represent a significant threat to health and well-being (Wade, Wilksch, & Lee, 2012), with a recent meta-analysis noting the high prevalence of the residual category of eating disorders, now referred to as "other specified feeding or eating disorder" (DSM-5), in eating disorder populations (40–60%) and suggesting minimal differences with clinical disorders on measures of eating and general psychopathology (Thomas, Vartanian, & Brownell, 2009). Of those individuals who seek treatment and receive empirically supported therapies (such as cognitive behavioural therapy), there is no guarantee of positive treatment response or recovery (Fairburn et al., 2009; Wilson, 2005). However, many of those with eating or body-related concerns delay or forgo seeking help entirely, often due to the belief their concerns did not warrant therapy or to avoid shame and stigmatisation (Meyer, 2005). Consequently, it remains imperative to both establish efficacious interventions aimed at preventing eating disorders, and to disseminate them effectively to populations at risk.

Female university students exhibiting body concerns represent such a high-risk population, given that eating disorders have a higher prevalence in women than men, have a peak onset coinciding with the transition from adolescence into young adulthood, and are strongly predicted by the presence of body dissatisfaction (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Lewinsohn, Striegel-Moore, & Seeley, 2000; Striegel-Moore & Bulik, 2007). Additionally, high proportions of female university students report the desire to lose weight and are engaging in dieting and other disordered eating behaviours such as bingeing and purging (Berg, Frazier, & Sherr, 2009; Eisenberg, Nicklett, Roeder, & Kirz, 2011; Mintz, Mintz, & Betz, 1988; White, Reynolds-Malear, & Cordero, 2011; Yager & O'Dea, 2008). As a result, eating disorder prevention efforts have sought to engage with this population in order to ameliorate these risk-factors and avoid the development of entrenched clinical disorders. Many such prevention approaches have now been developed, including interventions involving psycho-educational, media literacy, cognitive-behavioural, and

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dissonance-based content, and have been evaluated in a variety of formats and with various success (see Yager & O'Dea, 2008; for a review).

Although the establishment of efficacious programmes is clearly an important goal, and one to which progress is evident (Shaw, Stice, & Becker, 2009), an equally important goal is that of moving towards effectiveness and dissemination in real-world settings (Becker, Stice, Shaw, & Woda, 2009; Flay et al., 2005; Marchand, Stice, Rohde, & Becker, 2011). A particular challenge noted by Becker and colleagues (Becker, Ciao, & Smith, 2008) however is the apparent lack of interest on the part of individuals representing the target population (i.e., university-aged females). This is underscored by the difficulty in recruiting large enough samples to be adequately powered to detect intervention effects in prevention programmes which traditionally have not achieved large effect sizes. For instance, amongst studies recruiting voluntary university-aged females with body image concerns (i.e., a selective sample) for trials involving a face-to-face component, many studies provided individual financial compensation (Bearman, Stice, & Chase, 2003; Franko, 1998; Franko & George, 2008; Franko et al., 2005; Matusek, Wendt, & Wiseman, 2004; McMillan, Stice, & Rohde, 2011; Mutterperl & Sanderson, 2002; Stice, Chase, Stormer, & Appel, 2001; Stice, Mazotti, Weibel, & Agras, 2000; Stice, Rohde, Durant, & Shaw, 2012; Stice, Rohde, Gau, & Shaw, 2009; Stice, Rohde, Shaw, & Marti, 2012; Stice, Shaw, Burton, & Wade, 2006; Stice, Trost, & Chase, 2003), course credit (Martz & Bazzini, 1999; Matusek et al., 2004; Nicolino, Martz, & Curtin, 2001; Ridolfi & Vander Wal, 2008; Roehrig, Thompson, Brannick, & van den Berg, 2006), or conceded potentially underpowered sample sizes (Celio, 2000; McVey et al., 2010; Mitchell, Mazzeo, Rausch, & Cooke, 2007; O'Brien & LeBow, 2007). Moreover, in many cases, even compensation did not lead to the participation rates that could be expected based on the size of the prospective pools.

Perhaps an exception to this recruitment challenge is that of online prevention programmes (Bauer, Moessner, Wolf, Haug, & Kordy, 2009; Lindenberg, Moessner, Harney, McLaughlin, & Bauer, 2011; Morgan, Jorm, & Mackinnon, 2013; Taylor et al., 2006). These studies have achieved larger numbers of interested parties without the offer of compensation, conceivably due to the ease and anonymity inherent in registering and participating. However, this comes with a cautionary aside given that Taylor et al., recruited over three years to achieve their sample size ($N = 480$), and both Bauer et al.'s and Lindenberg et al.'s studies report a surprising number of participants who, despite indicating initial interest and completing screening measures, failed to register for the programme itself. This problem of retaining participants has also been noted with internet-based interventions in depression and anxiety (Christensen, Griffiths, & Farrer, 2009). Thus, although it appears that internet-delivered programmes represent a potentially successful vehicle for wider dissemination, additional work needs to be done to ensure full participation and compliance in order to reap maximum benefit of the programme.

Limited uptake into preventive interventions is an obstacle that has also been documented within fields such as depression (Cuijpers, van Straten, Warmerdam, & van Rooy, 2010; Morgan et al., 2013), substance abuse (Larimer & Cronce, 2007), and family-based interventions (Heinrichs, 2006; Prinz et al., 2001). As suggested by Cuijpers et al., this is likely due to a combination of factors related to the participants themselves (e.g., lack of awareness, stigma), organisation (e.g., lack of resources, capacity for reach), and the chosen recruitment methods. The identification of such barriers and their solutions represents an important objective as these clearly present a stumbling block to the dissemination and broader implementation of effective preventive strategies, and is a goal that has been echoed specifically within eating disorders prevention (Stice, South, & Shaw, 2012).

One potential solution to the lack of individual interest (or limited awareness that there is a problem) is to take a participatory approach: partnering with communities to disseminate programmes within broader social systems rather than at the individual level (Becker et al., 2009; Neumark-Sztainer et al., 2006). This is an important undertaking, and indeed, Becker et al., have successfully implemented partnerships with university sororities and athletic departments to deliver an empirically supported dissonance-based intervention (Becker, Bull, Schaumberg, Cauble, & Franco, 2008; Becker, McDaniel, Bull, Powell, & McIntyre, 2012; Becker et al., 2010; Perez, Becker, & Ramirez, 2010). Nevertheless, the question remains: can we increase individual interest in interventions when such social systems are either non-existent, or simply inaccessible? This is pertinent for countries such as Australia, where there is no sorority framework and limited social systems capturing large numbers of young adult women. The purpose of this study was therefore twofold: first, to explore potential factors which may prevent university-aged females from participating in face-to-face prevention programmes; and second, to evaluate a preliminary experimental attempt to increase interest and motivation regarding voluntary participation.

With respect to our first aim, a number of factors may contribute to an individual's disinclination to volunteer for face-to-face interventions aimed at improving body concerns. Practical aspects specific to the delivery of the programme such as the location, time demands, and group versus individual format are necessary considerations when exploring voluntary engagement. Additionally, positive beliefs and attitudes towards body image interventions would feasibly act as motivators for volunteering. In particular, we were interested in assessing beliefs regarding perceived helpfulness of group programmes for body image and confidence that body image can be improved overall. Finally, certain dispositional variables may also play a role in determining interest in participation. Although the presence of body dissatisfaction and concern over weight and shape would appear logically to predict participation, cognizance of body image as a problem also needs to be present to initiate help-seeking (Mond et al., 2007). Emotion-related difficulties, namely, negative affect, escape-avoidant coping, and emotion dysregulation, have been shown to be related to reduced engagement in a metacognitive acceptance technique (Atkinson & Wade, 2012), and may also predict reduced interest towards volunteering in the first instance. Personal ineffectiveness, encompassing feelings of inadequacy and lack of personal control, may also lead to reduced interest in participation due to feelings of helplessness and seeming inability to effect change. This is supported by related work where self-efficacy has been shown to predict better treatment outcomes within eating disorder populations (Pinto, Heinberg, Coughlin, Fava, & Guarda, 2008; Steele, Bergin, & Wade, 2011). Conversely, ineffectiveness may in fact lead to increased interest due to the perceived need for external help with personal problems.

Regarding our second aim, a brief experimental strategy was devised to increase interest and likelihood of participation in a body image intervention study on a voluntary basis, and can be conceptualised from within a motivational framework. Within the field of motivation, self-determination theory (SDT; Deci & Ryan, 1985) highlights the interworking of both intrinsic (inherent interest and satisfaction) and extrinsic factors (external influences), that facilitate self-determined motivation in the service of growth and wellness. Self-determined motivation has been associated with outcomes such as better engagement and performance, behavioural maintenance, and treatment adherence, and is fostered when a goal or behaviour is personally valued (either innately or as a result of internalisation of external elements) and developed with a sense of autonomy, competence, and relatedness (Deci & Ryan, 2000). On this basis, it was postulated that answering questions