Cognitive-behavioral roots of body image therapy and prevention

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Highlights

- Cash's cognitive behavioral model is the foundation for many interventions.

- Cash was the pioneer of self-directed CBT programs for body image.

- Researchers have developed CBT programs of different formats for different groups.

- Cash's model informed cognitive dissonance, media literacy, and third-wave programs.

- Contemporary positive body image interventions have built upon Cash's model.

Abstract

The existing array of evidence-based body image prevention and intervention approaches has evolved over time. However, the majority originated directly or indirectly from a cognitive-behavioral conceptualisation of body image pioneered by Thomas F. Cash. In this way, it is difficult to overstate the impact Tom Cash has had on body image intervention research and practice. His ground-breaking work, building on the work of Schilder and Fisher, was the first to provide a comprehensive model of body image that reflected the broad range of influences and consequences of body image. His differentiation of the components of body image as a construct and between body image traits and states allowed us to identify and influence targets for intervention. Moreover, the intervention strategies that Tom Cash employed are still used today and laid the foundations for contemporary intervention programs. There is a gap of more than 15 years between the first and last of us receiving our PhDs, yet Cash's work has been an important influence on us all. We are extremely grateful for the theoretical and practical tools that he has given to our field. In this paper, we will outline how Cash's work has informed contemporary body image intervention and prevention. We will describe Cash's theory and intervention tools before discussing how this work paved the way for subsequent research and practice.

1. Introduction

Evidence-based body image prevention and intervention approaches have evolved significantly. Many interventions have originated directly or indirectly from a cognitive-behavioral conceptualisation of body image pioneered by Thomas F. Cash. Tom Cash has therefore had an enormous impact on body image intervention research and practice. His ground-breaking work on cognitive-behavioural approaches to addressing body image, which extended the work of Schilder and Fisher, provided the first comprehensive theoretical model of body image, including its influences and consequences. His identification of state and trait components of body image facilitated the identification of targets for intervention. The intervention strategies that Tom Cash conceptualised are still used today and have laid the foundations for many contemporary intervention approaches.

This paper provides an overview of Thomas F. Cash's pivotal work in the development of cognitive behavioral therapy (CBT) interventions to address body image concerns, and how this work has laid the foundation for the development of other intervention and prevention approaches. We begin by introducing Cash's cognitive behavioral theoretical model of body image. Then, we discuss his research developing self-directed CBT programs targeting components in his model and how other researchers have developed similar CBT programs in different formats for different groups. Next, we consider more contemporary intervention strategies that target components comprised in Cash's model and have received empirical support, including cognitive dissonance, media literacy, and third-wave CBT approaches. Finally, we discuss the more recent move to intervention strategies focusing on positive body image, which build on Cash's earlier work and offer promise for the prevention field.

2. Cash's Cognitive-Behavioral Model of Body Image

Cash (2002, 2012) conceptualised a theoretical cognitive-behavioral model of body image, which captures various inter-related factors. He proposed and differentiated historical factors and proximal or concurrent factors that shape the development of body image attitudes, comprising 'body image evaluation' and 'body image investment' (see Figure 1). Body image evaluation reflects an individual's beliefs and appraisals (e.g., satisfaction or dissatisfaction) regarding their body. This is distinct from body image investment, which refers to the cognitive, behavioral, and emotional importance of an individual's body in relation to their sense of self-worth. The proposed historical and proximal factors have subsequently constituted targets for many different intervention approaches, which will be discussed later.

Historical factors in the model pertain to earlier events, experiences, and characteristics that influence an individual's thoughts, feelings, and behaviors in relation to their body (Cash, 2002, 2012). These include cultural socialization, interpersonal experiences, physical characteristics and changes, and personality aspects. Cultural socialization refers to the messages conveyed, primarily via media (e.g., television, social media, adverts), which dictate and reinforce cultural "standards" and norms relating to physical attractiveness. In addition to media, expectations and opinions concerning cultural beauty norms are also conveyed via interactions with family, friends, and others. These may be conveyed directly, through making well-meaning and critical comments about one's appearance, and also indirectly, for example, via parental role modelling. Physical characteristics are also a key factor in shaping body image, whereby the extent to which one's appearance matches with cultural norms of physical attractiveness can influence body image, leaving individuals with less culturally valued physical characteristics (e.g., higher body weight, acne, grey hair) more vulnerable. Finally, personality also plays a role in the development of body image. Whilst certain traits (e.g., perfectionism, self-objectification,

endorsement of traditional gender attitudes) may increase the risk for body image concerns, others (e.g., strong self-concept, high self-esteem) may foster resilience and promote positive body image.

Proximal factors in the cognitive-behavioral model refer to present life events, which comprise precipitating and maintaining influences on body image experiences. These include information processing and internal dialogues, body image emotions, and coping and self-regulatory actions. It is postulated that specific events or situational cues (e.g., body exposure, social scrutiny, changes in appearance) activate schema-driven processing of information relating to, and self-evaluations of, one's appearance. Individuals with self-schemas relating to appearance (i.e., with higher levels of body image investment) pay more attention to and preferentially process information pertinent to their appearance. The subsequent internal dialogues (referred to as "private body talk") constitute emotional automatic thoughts and interpretations about one's appearance. Among individuals with problematic appearance self-schemas and body image attitudes, the thought processes and internal dialogues may reflect faulty cognitive distortions, such as overgeneralization, dichotomous thinking, biased social comparisons, and magnification of perceived defects. To cope with distressing thoughts and emotions relating to one's body, individuals engage in a range of well-learned strategies and behaviors. Adjustive reactions to perceived environmental events may consist of body checking, avoidant or body-hiding behaviors, seeking social reassurance, or compensatory strategies. These behaviors and strategies may temporarily relieve body image distress, however, they reinforce this distress in the long-term.

3. Cognitive Behavioral Therapy

Tackling key factors conceptualised within the cognitive behavioral model of body image, cognitive behavioral therapy (CBT) is one of the most researched and empirically supported interventions to address body image concerns. The aim of CBT is to modify irrational and dysfunctional thoughts, emotions, and behaviors, through techniques such as self-monitoring, cognitive restructuring, psychoeducation, desensitization, and exposure and response prevention. Cash and colleagues were among the first researchers to develop and evaluate CBT programs to address body image concerns. In 1987, Butters and Cash conducted a randomised controlled trial to evaluate a therapist-administered 6-session one-to-one structured CBT program among university women with body image concerns in the United States. The program consisted of psychoeducation concerning the causes, prevalence and effects of body dissatisfaction; relaxation training; desensitization (e.g., mirror exposure); self-monitoring; (i.e., antecedent events, beliefs, consequences); identification and correction of cognitive body image errors; engaging in body-related behaviors for sense of mastery or pleasure; stress-inoculation techniques; and relapse-prevention strategies. The program effectively decreased body dissatisfaction, preoccupation with appearance, and body image-related avoidance, with improvements remaining two months later (Butters & Cash, 1987).

Following this, Cash published an audio-recorded CBT program, *Body-image therapy: A program for self-directed change,* to be used in self-directed and therapist guided formats (Cash, 1991). The program comprised 11 sessions, and included self-assessment of historical, cultural, physical, and interpersonal influences on body image; self-monitoring of body image experiences (i.e., ABCs: antecedent events, mediating cognitions, and emotional and behavioral consequences); relaxation training; desensitization (e.g., mirror exposure); identification and cognitive restructuring of cognitive body image errors; self-assessment of avoidant and compulsive body image behaviors and strategies (e.g., exposure, response prevention, stress inoculation) to reduce these; using problem-solving and assertion to

manage difficult interpersonal events; and relapse-prevention strategies. Grant and Cash (1995) compared two different ways of administering the program among body-dissatisfied young women: self-directed with modest therapist contact (weekly 20-minute meetings) versus therapist-delivered group therapy (weekly 90-minute sessions). Equivalent effects were found for both modalities, with improvements observed in body satisfaction, body image affect and thoughts, investment in appearance, preoccupation with appearance, and body image-related avoidance.

In addition to the audio-recorded CBT program, Cash developed a 10-week, 8-step, self-help CBT book, *What do you see when you look in the mirror? Helping yourself to a positive body image* (Cash, 1995), which was nearly identical in content. Cash and Lavallee (1997) evaluated the self-help book among body dissatisfied university women, who only encountered professional contact in weekly 10-minute calls with the research assistant to discuss compliance. The minimal-contact program attained equivalent effects to both conditions explored by Grant and Cash (1995), indicating the efficacy of self-help CBT programs with minimal therapist contact to address body image concerns.

As a result of this evidence, in 1997, Cash published a refinement to his self-help CBT book, and titled it *'The body image workbook: An 8-step program for learning to like your looks'*. This was updated a decade later (Cash, 2008). Table 1 displays the content for both editions of the workbook.

Whilst Cash's CBT program has not undergone evaluation in its entirety, two studies explored the effectiveness of self-administered selected components. Firstly, Strachan and Cash (2002) randomised university women and men experiencing body image distress to either a combination of psychoeducation and self-monitoring (reflecting steps 1 and 2 of the program), or a combination of these components with the addition of strategies for

identifying and modifying faulty body-image cognitions (i.e., cognitive restructuring; reflecting steps 4 and 5 of the program). The interventions lasted six weeks, within which there was no face-to-face therapist support. Findings indicated that the combination of psychoeducation and self-monitoring was equally effective in improving body dissatisfaction, body image investment, and body image-related emotion, as the combination plus the addition of cognitive restructuring. Strachan and Cash (2002) noted lower compliance with the additional cognitive components, compared with studies evaluating other CBT programs (including self-administered programs) with at least modest therapist input. This suggests that a therapist may be necessary to facilitate the more demanding components of CBT, such as cognitive restructuring. Based on these findings, Cash and Hrabosky (2003) tested a 3-week program comprising psychoeducation and self-monitoring with greater therapist contact (i.e., weekly meetings to administer instructions and exchanging of materials), which attained similar improvements in body image, and additional reductions in eating pathology. Further, attrition rates were lower (14%) compared with the 53% attrition rate in the previous evaluative study (Strachan & Cash, 2002), further emphasising the importance of therapist involvement for reinforcing participants' adherence and progress.

Since Cash's promising start to developing CBT programs to improve body image, other researchers have developed CBT programs employing different formats and targeting different groups. Indeed, whilst Cash had primarily focused on self-directed CBT programs evaluated among university women, Rosen and colleagues evaluated therapist-delivered group-based CBT programs among this group (e.g., Rosen, Cado, Silberg, Srebnik, & Wendt, 1990; Rosen, Saltzberg, & Srebnik, 1989), demonstrating improvements on body image compared with a control group up to three months later. Further, a therapist-delivered individual CBT program was found to significantly improve shape concern among women relative to a relaxation control group; with effects lasting up to three months (Shafran, Farrell,

Lee, & Fairburn, 2009). The benefits of CBT on body image have also been extended to women in midlife. When compared with a waitlist control group, group-based CBT programs have been found to improve body image among women in midlife (Smith, Wolfe, & Laframboise, 2001), with one program attaining lasting effects on multiple measures of body image and eating pathology up to six months later (McLean, Paxton, & Wertheim, 2011).

An online CBT program has also been developed and evaluated by a group of researchers (Celio et al., 2000; Winzelberg et al., 2000; Zabinski, Wilfley, Calfas, Winzelberg, & Taylor, 2004). *Student Bodies* is an 8-week structured CBT intervention, with the addition of an online moderated discussion group. Participants are sent weekly emails to encourage them to participate in the next session. Once logged in, the individuals are provided with weekly online content, and are invited to complete associated activities, such as self-monitoring, writing in their journal, or participating in the online discussion group; which is moderated by a psychologist. A randomized controlled trial evaluating *Student Bodies* was conducted among more than 400 women (M_{age} = 20.8) at increased risk for developing an eating disorder in the US (Taylor et al., 2006). In comparison with the waitlist control group, intervention participants experienced significant reductions in weight and shape concerns for up to one year later. Further, subgroups of women with either baseline compensatory behaviors (e.g., laxative use, self-induced vomiting) or higher baseline body mass index (BMI) reported a decrease in the onset of eating disorders. Other researchers (Chithambo & Huey, 2017) also developed an online CBT program; primarily derived from content comprising *The Body Image Workbook* (Cash, 1997). In four online sessions, participants engage in several activities, such as recognising alternative and rational interpretations of irrational thoughts. A randomised controlled trial evaluating the program supported its efficacy in reducing body dissatisfaction, eating pathology, internalization, and depression, among US women (M_{age} = 20.9); when compared with the control group

(Chithambo & Huey, 2017). Collectively, these findings indicate promise for Internet-based CBT programs, which are less costly and have the potential for greater scalability.

CBT programs have also been developed for individuals with a visible difference, defined as an altered appearance, or one considered different from the 'norm.' However, they tend to have been evaluated with less rigour and have demonstrated less promising findings (Bessell & Moss, 2007). Nonetheless, more CBT-based programs are undergoing development. For example, several psychologist-delivered group-based CBT programs have demonstrated efficacy in improving body image among individuals with appearance changes resulting from treatment for breast cancer (e.g., Lewis-Smith, Diedrichs, & Harcourt, 2018; Sebastián, Manos, Bueno, & Mateos, 2007). Further, researchers have developed *Face IT*, a self-administered CBT-based online intervention with minimal therapist input targeting adults with any form of visible difference. A randomised controlled trial found similar improvements in body image in the computer-based program compared with a face-to-face version of the intervention, with both attaining greater improvements relative to the control group (Bessell et al., 2012). A modification of the online program is being developed for adolescents and has demonstrated promise (Williamson, Griffiths, & Harcourt, 2015).

Overall, two meta-analytic reviews have supported the efficacy of CBT (Cash & Smolak, 2011; Farrell, Shafran, & Lee, 2006). In 2005, Jarry and Ip conducted a meta-analysis to review the effectiveness of 19 standalone-CBT programs for body image concerns. Overall, they found a large, positive effect on body image ($d+ = 1.00$). Changes were found in the behavioral, evaluative (i.e., satisfaction), and perceptual aspects of body image. Jarry and Ip (2005) concluded therapist-assisted programs to be more effective than self-directed programs. Further, a meta-analysis of change techniques employed in body image interventions found that interventions comprising CBT-based techniques were associated with larger effects on body image, compared with other strategies such as self-

esteem enhancement exercises and discussing physical activity (Alleva, Sheeran, Webb, Martijn, & Miles, 2015). These techniques included discussing the role of cognitions in body image, teaching monitoring and restructuring of cognitions, and incorporating guided imagery, exposure, and size-estimate exercises.

Interestingly, Jarry and Ip's (2005) earlier meta-analysis noted the smallest improvements in the investment dimension of body image, compared with body satisfaction and behavioral components. It was proposed that whilst CBT is equipped to effectively challenge the manifestations of high body image investment, it may be less equipped to tackle its underlying idiosyncratic processes. Jarry and Ip (2005) suggested this may be due to these individuals still being heavily overinvested in their appearance. Further, whilst CBT demonstrates potential to improve body image among certain groups (e.g., those with eating pathology; Rosen, Reiter, & Orosan, 1995), the therapeutic model may not always be easily translatable to non-clinical settings (e.g., in schools).

4. **Cognitive Dissonance**

CBT programs represent the body image interventions that are most strongly rooted in the cognitive behavioral model of body image. However, Cash's (2002, 2012) model also laid the foundation for the development of other eating disorder prevention strategies and for programs that are disseminated in non-clinical settings. One effective technique is the induction of cognitive dissonance, which is based on the theory that holding cognitions inconsistent with one's behavior evokes psychological discomfort, motivating the individual to change their attitudes and cognitions to match their behavior to restore consistency (Festinger, 1957). The *Body Project* (Stice & Presnell, 2007), one of the most efficacious eating disorder prevention programs (Watson et al., 2016), is based on cognitive dissonance. In this program, dissonance around appearance-related beliefs and behaviors is achieved by

encouraging individuals to engage in counter-attitudinal exercises, whereby they are required to critique and speak out against the thin-ideal of beauty. This results in dissonance, as the individual who internalizes the thin-ideal is acting in a way which is inconsistent with their beliefs. This putatively leads to a shift in attitude towards the new perspective to relieve discomfort. This then is thought to lead to reduced internalization of the thin-ideal, which theoretically, in turn, should result in decreases in body dissatisfaction, dieting, and eating pathology (Stice, 2001; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), given its role as a widely recognised risk factor for these outcomes among females (Jackson & Chen, 2011; Rodgers, McLean, & Paxton, 2015; Stice, 2002; Stice & Whitenton, 2002) and males (Hausenblas et al., 2013; Jackson & Chen, 2011).

Cognitive dissonance approaches primarily focus on attitude change. Specific activities of cognitive dissonance-based interventions target, and can be mapped onto, Cash's social-cognitive model. For example, the *Body Project* directly targets cultural socialization, a historical influence, in addition to thin-ideal internalization, an aspect of body image investment. It includes activities that discuss the role of activators (e.g., appearance ideals, appearance-related comments), beliefs (e.g., thoughts and interpretations, feeling fat when engaging in social comparison), and emotional and behavioral consequences (e.g., feeling worthless, dieting and exercise behavior). It also directly addresses aspects of cognitive processing, for example, by challenging the relevance of social comparison with appearance ideals in the media. Finally, it encourages behavior change through behavioral challenges, such as going swimming or wearing shorts despite fears of negative evaluation or not meeting appearance ideal standards.

Meta-analytic reviews indicate that cognitive dissonance approaches, primarily in the form of the *Body Project* intervention, are the most effective eating disorder prevention programs for selective samples of girls aged 14 years and above (Stice, Shaw, & Marti,

2007). Compared with other intervention approaches, programs employing a cognitive dissonance approach attained larger effects for body dissatisfaction, eating pathology, dietary restraint, and thin-ideal internalization (Becker, Smith, & Ciao, 2006; Stice, Trost, & Chase, 2003), with effects maintained up to three years post-intervention in some cases (e.g., Stice, Marti, Spoor, Presnell, & Shaw, 2008). Indeed, multiple randomised controlled trials have demonstrated the effectiveness of the *Body Project* and its variations in improving body dissatisfaction, eating pathology, and other risk factors among women at university (18-21 years), when delivered by body image experts or psychologists (Becker, Smith, & Ciao, 2005; Matusek, Wendt, & Wiseman, 2004; Mitchell, Mazzeo, Rausch, & Cooke, 2007; Stice, Mazotti, Weibel, & Agras, 2000). Findings also suggest that the program can be task shifted to clinicians (Stice, Butryn, Rohde, Shaw, & Marti, 2013; Stice, Rohde, Butryn, Shaw, & Marti, 2015; Stice, Rohde, Durant, Shaw, & Wade, 2013; Stice, Rohde, Shaw, & Gau, 2017) and peer leaders (Becker, Bull, Schaumberg, Cauble, & Franco, 2008; Becker et al., 2010; Stice et al., 2013; Stice et al., 2017).

Research has also indicated that the *Body Project* is an effective intervention in the school context. Findings show the program to be beneficial for mid to older adolescent girls (14-17 years), with body image expert or psychologist facilitators delivering improvements in body dissatisfaction, internalization, and eating pathology (Stice et al., 2003, 2008). Further, task shifting delivery of the program to school staff (i.e., nurses, counsellors, teachers; Stice, Rohde, Gau, & Shaw, 2009; Stice, Rohde, Shaw, & Gau, 2011), and older peers (Ciao, Latner, Brown, Ebneter, & Becker, 2015; Halliwell, Jarman, McNamara, Risdon, & Jankowski, 2015) does not dampen its effectiveness, with largest and longest-lasting effects observed when delivered by school staff. Researchers have adapted the *Body Project* for use with younger adolescent girls (12-13 years); however, evaluations have produced conflicting findings (Halliwell & Diedrichs, 2014; Rohde et al., 2014). Body dissatisfaction was found to

have reduced significantly at post-intervention in one study (Halliwell & Diedrichs, 2014), but in another study no improvements were found immediately post-intervention or at follow-up (Rohde et al., 2014), with effect sizes smaller than in other universal trials among older adolescent girls (Stice et al., 2009). This suggests the possibility that dissonance approaches may be less effective for younger girls compared with their older counterparts, or that younger girls may experience less body dissatisfaction.

Given the success of cognitive dissonance programs in face-to-face settings, research has explored the potential for task-shifting from in person facilitators to online automated delivery. Chithambo and Huey (2017) created an online cognitive dissonance program, primarily derived from content comprising the *Body Project.* It consisted of four weekly sessions, with homework assignments in-between. Participants were university women (M_{age} = 20.9) at elevated risk for developing an eating disorder. Relative to a no-treatment control condition, intervention participants reported significantly greater reductions in body dissatisfaction and internalization at post-intervention. This study provided support for an online cognitive dissonance program relative to a no-treatment control condition; however, it did not provide insight as to how it would perform in comparison to the original in person group-based format, and in the longer-term. Similarly, Stice and colleagues created an online version of the *Body Project,* known as the *eBody Project* (Stice et al., 2017). It comprises six 40-minute modules, which include self-education games and activities (such as text role plays). The activities are entirely voluntarily, thus mirroring the group program. A four-arm randomised controlled trial conducted with university women (M_{age} = 22.2) allocated participants to either a clinician-led *Body Project,* a peer-led *Body Project,* or the Internet-based *eBody Project*. Findings revealed that relative to an educational video control group, participants who completed the *eBody Project* reported significantly greater reductions in body dissatisfaction and related variables, with improvements in internalization and eating

pathology lasting six months later. However, participants in both the clinician- and peer-led *Body Project* conditions showed significantly larger reductions in these outcomes than *eBody Project* participants. This suggests that despite having similar content, the group-based format of the *Body Project* may bolster intervention effects. For example, this may be due to participants providing social support to one another (Shaw, Rohde, & Stice, 2016) or a change in perceived group norms serving as an intervention mechanism (Cruwys, Haslam, Fox, & McMahon, 2015).

Despite Cash including men in the evaluation of his CBT program, men have tended to be overlooked in the development and evaluation of other body image and eating disorder prevention interventions. However, with increasing research highlighting the prevalence of body image concerns among men at all different stages of life (Olivardia, Pope, Borowiecki, & Cohane, 2004), the development of interventions for this group is warranted. Fortunately, researchers are beginning to examine the applicability of cognitive dissonance-based programs to reduce body dissatisfaction among men. One study evaluated a mixed-gender version of the *Body Project* with male and female university students (M_{age} = 19.9; Kilpela et al., 2016). The two 2-hour sessions comprising the *Body Project 4 All* were delivered by a male and female peer leader, and content was similar to that of the original program. However, whilst promising for the men, there were no significant improvements in any outcome variables among women. Adaptations of the *Body Project* specifically for use with young adult men only have indicated promise with regard to improving body image and related outcomes (Brown, Forney, Pinner, & Keel, 2017; Jankowski et al., 2017). Further, a cognitive dissonance program adapted for use with gay men in particular (*The PRIDE Body Project*) has also demonstrated significant improvements to body dissatisfaction, eating pathology, drive for muscularity, and self-objectification (Brown & Keel, 2015).

5. Media Literacy

Another intervention strategy that targets the cultural socialization and cognitive processing components (e.g., social comparisons) of Cash's cognitive behavioral model of body image is media literacy. The aim of media literacy is to empower people to adopt a critical approach when they encounter media content, whereby they identify, analyse, and challenge unhealthy and unrealistic messages presented in the media (Levine, Piran, & Stoddard, 1999). Again, this intervention approach is consistent with, and can be mapped onto, Cash's cognitive-behavioral model of body image. Like dissonance approaches, media literacy approaches primarily target investment components of body image and cognitive processing, including the tendency to compare one's appearance to that of others. Specifically, by increasing scepticism about the relevance of media images of attractiveness, media literacy interventions aim to reduce internalization of these ideals and an individual's tendency to make social comparisons with these ideals. In turn, and as a consequence of changes to investment and social-processing elements of Cash's (2002, 2012) model, media literacy interventions should also lead to a reduction in body dissatisfaction and associated appearance-focused behaviors.

The protective influence of media literacy has been highlighted in cross-sectional research conducted with adolescent and adult women (McLean, Paxton, & Wertheim, 2016). Specifically, greater appearance satisfaction is associated with higher levels of media literacy. This includes scepticism concerning the realistic nature of idealised media images and messages (Engeln–Maddox, 2005; McLean, Paxton, & Wertheim, 2013); scepticism concerning the similarity of models in adverts to women in real life (McLean et al., 2013); and recognition that media influences attitudes and behaviors (Engeln–Maddox, 2005). Further, media literacy has also been associated with lower internalization of appearance ideals and appearance comparisons (Engeln–Maddox, 2005; McLean et al., 2013).

The last 20 years has seen the development and evaluation of several universal media literacy interventions designed to target body image. Whilst slightly varied in their content, they tend to have common goals: teach individuals about how the media creates images (i.e., models that do not represent the appearance of most people in the general population, digital manipulation, extensive styling, favourable lighting etc. to produce images of unattainable appearance ideals); encourage individuals to question and challenge the pursuit of media-portrayed unrealistic appearance ideals (e.g., reflect on the motivations behind advertising to sell products); and engage participants in discussions pertaining to important non-appearance related aspects of life (e.g., abilities, personal qualities). These goals and activities align with steps from Cash's updated workbook (Cash, 2008). For example, Step 2 contextualises the influence of cultural socialization, including media messages, on body image. This explored further in Step 4, when common assumptions (e.g., media messages making it impossible to be satisfied with one's appearance) are questioned and challenged. Step 4 also encourages the reader to focus on the many non-appearance related qualities that they and others possess.

Early media literacy programs focused on appearance pressures relating to traditional forms of media, including television, films, and magazines. One of the first media literacy programs to demonstrate potential was *GO GIRLS!*, developed by Niva Piran and colleagues. Following their promising pilot study conducted among girls in secondary school (Piran, Levine, & Irving, 2000), *GO GIRLS* was adapted and evaluated among both Australian adolescent boys and girls ($M_{age} = 13.4$) in a small randomised controlled trial (Wade, Davidson, & O'Dea, 2003). The program was comprised of five 50-minute sessions, with different topics, activities, and class discussions in each session. Adaptations were made to the content of the program to increase its relevance for both boys and girls. Findings from the study revealed a significant decrease in weight concern among students who received the media literacy program relative to the control group (Wade et al., 2003).

One of the leading media literacy programs that has received empirical support with both adolescent girls and boys is *Media Smart* (Wilksch, Tiggemann, & Wade, 2006). Content was informed by that of the original *GO GIRLS!* program (Piran et al., 2000) and the adapted version of the intervention (Wade et al., 2003). *Media Smart* comprises six 50-minute sessions. *Media Smart* has undergone numerous evaluations among nearly 2,000 adolescent girls and boys in Australia (Wilksch et al., 2006, 2015; Wilksch & Wade, 2009). These randomised controlled trials have revealed the program to be effective in reducing weight and shape concern, body dissatisfaction, appearance-ideal internalization, and dieting, among both genders, relative to a control group, with improvements present 2.5 years later among girls (M_{age} = 13.6; Wilksch & Wade, 2009). Further, adolescents experiencing higher levels of depression and at higher risk of an eating disorder experienced immediate benefits relative to those at low risk and levels of both (Wilksch, 2010; Wilksch & Wade, 2014).

Eating, Feminine Aesthetic Beauty Model and Mass Medias: How to Train Critical Students in Secondary School (AMM-EC) is an additional media literacy program which has demonstrated effectiveness relative to a control group in with regard to improving body satisfaction and related outcomes up to 2.5 years later among Spanish adolescents (Raich et al., 2008). *AMM-EC* includes similar content and activities to those comprising *Media Smart,* such as criticising the dominant beauty ideal, by making historical (e.g., beauty ideals in ancient Greece, the Marilyn Monroe beauty ideal) and cross-cultural (e.g., the 'giraffe women' of Myanmar, the larger women of Mauritania) comparisons of beauty ideals. Other school-based programs, within which media literacy has constituted a large component among other content (e.g., self-esteem, peer-based body talk and teasing, nutrition), have also demonstrated benefits with regard to improving a range of outcomes, including body image, eating pathology, internalization of the thin ideal, and negative affect (e.g., Dunstan, Paxton, & McLean, 2017; McLean, Wertheim, Marques, & Paxton, 2019). Further, trials have

indicated successful task-shifting of delivery of *Media Smart* and other programs within which media literacy forms a large part, to teachers (Diedrichs et al., 2015; Sharpe, Schober, Treasure, & Schmidt, 2013; Wilksch, 2015), with effects lasting up to one year later in one case (Sánchez-Carracedo et al., 2016).

Less research has explored the potential benefits of media literacy among adults; however, findings from female undergraduates in the US have indicated promise with regard to its benefits for body image (Becker et al., 2005; Coughlin & Kalodner, 2006; Posavac, Posavac, & Weigel, 2001). One example is a 2-session program developed by Becker and colleagues that is comprised of videos, discussion, and activities. The first session focuses on the thin ideal, and the ways in which it is perpetuated by advertisements. The second session focuses on questioning whether pursuing the thin ideal is realistic, and the costs of doing so. A video featuring individuals who have recovered from an eating disorder is also shown, which is followed by a discussion. An additional media literacy program, *Acknowledging and Rejecting the Media's influence on Eating and body image Disturbance (ARMED),* has been found to be effective among women at high risk of developing an eating disorder (Coughlin & Kalodner, 2006); improving body image and internalization two months later. *ARMED* includes similar content to the aforementioned program, with the addition of encouraging participants to identify positive non-appearance related aspects of themselves.

With the rise of social media use, and recognition of its adverse impact on body image and eating pathology (Fardouly & Vartanian, 2016; Holland & Tiggemann, 2016; Mills, Musto, Williams, & Tiggemann, 2018; Tamplin, McLean, & Paxton, 2018), interventions that counteract its negative influence are needed. McLean and colleagues recently developed a social media intervention for adolescent girls, known as *Boost Body Confidence and Social Media Savvy* (BOOST; McLean, Wertheim, Masters, & Paxton, 2017). Based on the premise that social media simultaneously promotes appearance ideals and is a platform for appearance

conversations and comparisons, the intervention includes both media literacy and peer components. *BOOST* was adapted from an existing media literacy intervention (Dunstan et al., 2017; McLean et al., 2019) to capture challenges associated with social media in particular (e.g., the targeted and influential nature of advertisements, appearance-related commenting with peers). The program consists of three 50-minute sessions, which are experiential and interactive in nature. *BOOST* was evaluated in an Australian pilot study of 101 adolescent girls (M_{age} = 13.10), and intervention participants reported significant improvements in body image, eating pathology, and media literacy, relative to the control group (McLean et al., 2017). These findings indicate promise for a combined media literacy and peer approach to address the unique pressures presented by the social media environment. This is a further demonstration of how Cash's (2002, 2012) cognitive-behavioral model of body image has paved the way for other successful intervention approaches.

6. Third-wave CBT approaches

Third-wave CBT approaches, including Acceptance and Commitment Therapy (ACT), Dialectical Behavioral Therapy (DBT), and mindfulness have become increasingly popular forms of intervention for body image concerns over the past decade. Evolving simultaneously from Buddhist philosophy and a cognitive behavioral model, these approaches map on and target the body image evaluation, cognitive and emotion components of Cash's model. Specifically, third-wave approaches aim to strengthen six self-regulatory competencies that support psychological flexibility: present moment awareness (non-judgementally noticing the complex interplay between one's thoughts, feelings, and physical sensations; as represented in Cash's [2002, 2012] model); experiential acceptance (sitting with and being open to painful internal experiences; cognitive processing and internal dialogues); cognitive defusion (being aware of the cognitive components of one's experience

[thoughts, interpretations], without allowing them to dominate); self-as-context (recognising that one's internal experiences are separate from the content or evaluation of one's experiences; as indicated in the cognitive behavioral model); valuing (identifying a purpose to guide action); and committed action (behaving in a manner consistent with one's values, even when this may be associated with painful internal experiences [i.e., more adaptive coping strategies and behaviors]; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Theoretically, it is postulated that strengthening these processes will weaken those that underpin psychological inflexibility (e.g., cognitive fusion, avoidance, disconnection from values) and thereby enable the individual to engage with negative body image experiences more adaptively. Elements of third-wave CBT approaches are evident in Step 3 of Cash's workbook (Cash, 2008), which teachers about mindfulness and acceptance, through exercises such as mindful eating, mindful mirror reflections, and a body scan.

Systematic reviews of eating disorder prevention and body image interventions (e.g., Linardon, Gleeson, Yap, Murphy, & Brennan, 2019; Watson et al., 2016) have highlighted DBT as an effective intervention approach for reducing body dissatisfaction (Mazzeo et al., 2016; Roosen, Safer, Adler, Cebolla, & Van Strien, 2012) and eating pathology (Mushquash & McMahan, 2015; Roosen et al., 2012; Telch, Agras, & Linehan, 2001) among adult women in pre-post analyses. However, all studies evaluated the DBT program among individuals presenting with eating disorder symptoms (e.g., binge eating disorder, emotional eating); thus, it is not known whether DBT-based interventions are effective among a universal population who are not presenting with eating pathology. Further, randomised controlled trials are necessary to confirm the indicated benefits. Similarly, ACT-based interventions have been indicated to improve eating pathology (Boucher et al., 2016; Levin, Potts, Haeger, & Lillis, 2018; Lillis, Hayes, & Levin, 2011; Palmeira, Pinto-Gouveia, & Cunha, 2017; Weineland, Arvidsson, Kakoulidis, & Dahl, 2012) and body image (Weineland et al., 2012)

among adult women. However, participants were primarily bariatric patients or participating in weight management programs, and evaluations were mostly pre-post analyses. Overall, the existing evidence suggests that DBT- and ACT-based approaches may be effective for eating pathology and body image among selected populations.

Whilst mindfulness has demonstrated improvements in reducing eating pathology among participants presenting with eating disorder symptoms (Alberts, Thewissen, & Raes, 2012; Levoy, Lazaridou, Brewer, & Fulwiler, 2017; Smith et al., 2008), this intervention approach also received support in relation to improving body image among universal samples. Indeed, research has demonstrated the protective effects of engaging in a brief single-session mindfulness exercise, following the induction of body dissatisfaction through exposure to idealised media images, among adult women (Margolis & Orsillo, 2016; Wade, George, & Atkinson, 2009). Participants were simply requested to observe their current thoughts and feelings without judgement, and to let them naturally pass. Whilst these findings indicate promise with regard to being able to immediately improve body image through brief training, these single-session interventions may not be capable of long-lasting impacts, thus suggesting the development of extended multifaceted programs. However, findings suggest that general mindfulness programmes may not be tailored enough to improve body image (Johnson, Burke, Brinkman, & Wade, 2017), and that concepts and strategies may require specific application to triggers for body dissatisfaction.

One example of a programme which has been developed to specifically target risk factors for disordered eating, and explicitly applies mindfulness techniques to body image, is *The Mindfulness Mode,* developed by Atkinson and colleagues (Atkinson & Wade, 2016). The 3-session group programme includes a range of different activities and exercises, plus between-session homework. In the first session, participants engage in a mindful eating and breathing exercise to experience present moment awareness. In the second session,

participants are introduced to the concept that thoughts and feelings are mental events that come and go, which is demonstrated by a decentring thought exercise in the context of negative body-related thoughts. Participants are also asked to practise mindfulness as they view idealised media images. The final session encourages participants to be open and welcoming of all experiences, regardless of whether they are positive or negative. They engage in activities that require them to generate self-compassionate responses to negative body-related thoughts, with reference to commonly experienced situations. In a randomised controlled trial conducted among Australian young adult women (M_{age} = 20.6) with body image concerns, findings revealed significant improvements in body image, eating pathology, and internalization of the thin ideal, among women who received the program, relative to the control group (Atkinson & Wade, 2016).

Based on these promising findings, the researchers adapted the program for classroom delivery to adolescent girls (Atkinson & Wade, 2015). Whilst the key topics and aims comprising each of the three sessions remained the same, some of the activities and media were adapted for a younger audience (e.g., the addition of a video from a popular cartoon). One study revealed significant improvements in body image, disordered eating, and related outcomes, but only among students who had the experienced co-creator as their facilitator, compared with other postgraduate facilitators (Atkinson et al., 2015). Whilst these findings suggest *The Mindful Mode* to be a worthy prevention program for adolescent females, they also indicate that task shifting may require more intensive training and support, and a certain level of facilitator expertise and experience is necessary for optimal results.

Other researchers have demonstrated the benefits of a mindfulness-based, self-compassion program delivered individually via podcasts (Albertson, Neff, & Dill-Shackleford, 2015). Participants are asked to listen daily to a different self-compassion meditation podcast each week, for three weeks. The first meditation is a 'compassionate body

scan,' whereby listeners are instructed to lie down and notice the sensations of various body parts as the move up from the feet to the head. The second meditation, 'affectionate breathing,' asks the listener to set an intention to breathe in an affectionate and kind manner toward themselves, and towards others who are suffering. The third and final meditation is an adaptation of loving-kindness meditation, which focuses on having self-compassion for a personal experience of suffering. It involves focusing on their breath, allowing any difficult emotions to arise, and locating the associated physical sensations. Following this, the listener is instructed to soothe themselves for experiencing these distressing thoughts and emotions.

The programme was evaluated in a randomised controlled trial among more than 200 adult women (M_{age} = 37.0) in the US with body image concerns (Albertson et al., 2015). Compared with the control group, women who participated in the self-compassion meditations reported significant increases in body appreciation, and reductions in body dissatisfaction and self-worth based on appearance; with improvements lasting three months later. Based on these promising findings, other researchers adapted and evaluated the program among university women who were not screened for body image concerns (Toole & Craighead, 2016). Findings revealed significant improvements in body appreciation, body surveillance, and appearance investment, among women who completed the program, relative to the control group, thus supporting the use of self-compassion meditation training among younger adult women.

7. Other Intervention Approaches

In the last 15 years, there has been an increased focus on positive body image and an effort to understand positive experiences of the body (Tylka & Piran, 2019). Indeed, Cash highlighted the importance of this shift in focus from solely researching negative body image to also examine positive, adaptive body image (Cash & Smolak, 2011). Alongside this

change, intervention work has begun to examine intervention strategies based on positive embodiment, body acceptance, and non-appearance aspects of body image. Two theories have been pivotal in facilitating this shift in focus: Tylka and colleagues' work on positive body image (for a review, see Tylka & Wood-Barcalow, 2015; Tylka & Piran, 2019) and Piran's work on positive embodiment (Piran, 2016, 2017; Tylka & Piran, 2019). It is beyond the scope of this paper to review all the intervention work stemming from these developments. However, it is useful to consider some examples of how these newer theories and associated interventions are also building on Cash's earlier work in the field.

Positive body image has three central components: appreciating the body's appearance and function; being aware of and attentive to the body's experiences and needs; and possessing a positive cognitive style for processing body-related messages in a self-protective way (Menzel & Levine 2011). In Cash's (2002, 2012) model, these components could sit alongside cognitive processing and internal dialogues, body image evaluation and investment, body image emotions, and behavioral strategies for self-regulation. However, they demand some expansion to the scope of the majority of research concerning Cash's model to encompass attitudes toward non-appearance aspects of the body and self-care behaviors.

One example of an intervention strategy building on models of positive body image, is the consideration of functionality appreciation. The most well-established research program is that of Alleva and colleagues. Alleva developed a writing intervention that trains individuals to focus on their body functionality. Participants complete a 15-minute writing exercise on three consecutive days. On the first day, participants describe the functions that their body can perform with regard to (a) bodily senses and (b) physical capacities, and why they are personally meaningful. The second day focuses on (a) internal processes and (b) creative endeavours; and the third day focuses on (c) communication and (d) self-care.

Participation in this intervention, compared to participation in control activities, is associated with sustained improvements in body image among young adult women (Alleva et al., 2018a; Alleva, Martijn, Van Breukelen, Jansen, & Karos, 2015) and also among women with rheumatoid arthritis (Alleva et al., 2018b). This intervention teaches women to reframe their focus on their bodies from an evaluation of appearance to an appreciation of the broad functions of their body. The intervention builds on developments in the field of positive body image and on self-objectification theory (Fredrickson & Roberts, 1997). However, it also targets central components of Cash's (2002, 2012) cognitive behavioral model: body image evaluation and investment.

Theories of positive embodiment apply a broader lens to understand the experience of being in a body (e.g., Piran, 2017). In this respect, embodiment theories are akin to Cash's (2002, 2012) consideration of a broad and comprehensive set of influences and consequences of living in a body. A positive experience of embodiment is understood in terms of: comfort in, and a positive connection with, the body; feeling agency of the body; an ability to freely express bodily desires; engaging in attuned self-care; and resistance to objectification (Piran, 2016, 2017). In addition, embodiment models stress the importance that engaging in embodying activities have in the development and maintenance of positive embodiment (Piran, 2017; Tylka & Piran, 2019). There is considerable evidence that individuals who engage with embodying activities; that is, activities that enhance an awareness of the experience of the body, connectedness with the body, and feelings of competence and empowerment, report relatively positive body image (e.g., Calogero, Tylka, Hartman McGilley, & Pedrotty-Stump, 2019; Menzel & Levine, 2011, Neumark-Sztainer, MacLehose, Watts, Pacanowski, & Eisenberg, 2018; Neumark-Sztainer, Watts, & Rydell, 2018; Swami & Harris, 2012; Tiggemann, Coutts, & Clark, 2014). Like functionality focused interventions, embodiment models relate to body image evaluation and investment, cognitive processing

and internal dialogues, body image emotions, and behavioral strategies for self-relation, and Cash's (2002, 2012) model requires similar extensions in application to incorporate embodiment. The emphasis on embodying activities is also evident in Step 8 of Cash's workbook (Cash, 2008), which encourages engagement in activities that foster mastery and pleasure (e.g., physical activity).

Contemporary interventions have begun to incorporate elements of embodiment. To date, the most explored embodiment intervention strategy is yoga (Neumark-Sztainer, 2019). The use of yoga aligns with Step 8 of Cash's workbook, and also with Steps 3 and 6, which teach relaxation, diaphragmatic breathing and mental imagery. Cook-Cottone and colleagues incorporated yoga into an eating disorder prevention program, *Girls Growing in Wellness and Balance* (GGWB; Cook-Cottone, Kane, Keddie, & Haugli, 2013). There is evidence that both the 10- and 14-week versions of the program significantly improve a range of risk and protective factors for eating disorders (e.g., Cook-Cottone, Talebkhah, Guyker, & Keddie, 2017; Scime & Cook-Cottone, 2008). Research has also demonstrated that yoga in isolation (Ariel-Donges, Gordon, Bauman, & Perri, 2019; Cox, Ullrich-French, Howe, & Cole, 2017) and yoga integrated with positive body image themes (Halliwell, Dawson, & Burkey, 2019) improves young women's body image, in comparison to control groups. Although these intervention strategies have their origins in newer theoretical perspectives, we can also trace elements of these approaches back to Cash's original formulations of the aetiology, correlates and interventions for body image disturbances.

Conclusion

In summary, Cash's pioneering work in developing CBT programs for negative body image paved the way for much contemporary intervention work. The key intervention targets in the most empirically supported programs include those highlighted by Cash (2002, 2012).

In attitude change approaches such as cognitive dissonance, media literacy, and body functionality appreciation, the primary intervention targets relate to appearance investment, body evaluation, and cognitive processing. In ACT, the primary intervention target relates to acceptance of negative body evaluation and awareness of the transitory nature of body image states. In interventions building on positive body image and embodiment, the focus broadens from a primary concern about appearance to encompass broader aspect of the experience of the body. Yet, these interventions continue to target elements of investment, evaluation, and affect. Moreover, the techniques employ similar strategies to those outlined by Cash in the 1990s. In short, Cash provided the framework on which contemporary body image interventions have been built. Our current successes in reducing negative body image and promoting positive body image and embodiment are, in no small part, due to the insights, evidence and creativity of Cash's earlier work.

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Table 1.

Steps comprising Cash's *The body image workbook: An 8-step program for learning to like your looks (1997, 2008).*

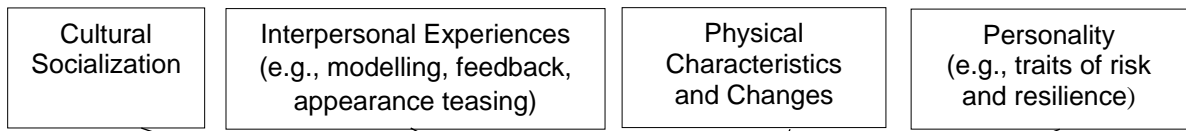| Step	Content in Cash's (1997) workbook	Additions/edits in Cash's (2008) updated workbook
Step 1	• Information to facilitate a clear understanding of the problematic and maladaptive cognitive, emotional, and behavioral elements associated with body image distress, and setting specific goals for change.	
Step 2	• Psycho-education, which includes empirical research concerning body image concerns (including the influence of the cultural context) and information concerning the principles of CBT. • A framework is also included to help the individual understand the causes of their body image distress, including the historical and proximal cognitive-behavioral causes of body image concerns. • A 'body image diary' is also provided to help the individual self-monitor the ABCs associated with body image experiences. This includes the 'Activators' (precipitating events and situations), 'Beliefs' (thoughts, assumptions, and interpretations), and 'Consequences' (resulting emotions and behaviors).	• The body image diary is moved to Step 3. • Instead, the individual is asked to engage in expressive writing across four days; reflecting on significant body mage experiences that occurred across different points in their life (e.g., childhood, teenage years).
Step 3	• Relaxation training (e.g., progressive muscle relaxation, diaphragmatic breathing, mental imagery), with the intention of applying these techniques to distressing experiences.	• The relaxation training and its application to the hierarchies of distress are moved to Step 6.

	• The person is instructed to construct two hierarchies; one concerning body areas associated with distress, and the other concerning situations which trigger distress. These items are ranked in order of those evoking the least to most concern. The acquired relaxations skills are then used to help manage distress as the individual progressively imagines, and directly looks at, body areas and situations from least to most distressing.	• Instead, the individual is taught about mindfulness and acceptance with regard to body image experiences (e.g., mindful eating). They engage in different activities, including mindful eating, a body scan, and mindful mirror reflections. • The body image diary (moved from Step 2) is also included.
Step 4	• Identifying core beliefs or assumptions about appearance, and considering their influence on thoughts, feelings, and behaviors. • The individual challenges these assumptions by formulating potential contradictions and flaws, and developing new rational perspectives.	
Step 5	• Identifying dysfunctional body image-related schema (i.e., cognitive errors), which underline one's thoughts, and replacing faulty 'private body talk' with a 'new inner voice'. • This involves the 'stop, look, and listen' technique, whereby the individual stops the negative self-talk, looks at the activating events and body talk that lead to body-image related emotional reactions, and listens to more rational statements.	
Step 6	• Teaching the individual that temporarily relieving coping behaviors (e.g., avoidance, checking) actually serve to worsen body image distress in the longer-term.	• Focus on avoidance of practices, places, people, and peoples; whereas checking behaviors now addressed in Step 7. • Instead, focus on relaxation training and its application when moving through hierarchies comprising different degrees of

	• Following self-monitoring of these behaviors, behavioral hierarchies are constructed so as to facilitate exposure and response prevention.	exposure to previously avoided practices, places, people, and poses ('ladder of success'; moved from Step 3).
Step 7	• Enhancing positive body image, by instructing the individual to engage in activities across different categories (appearance, health and fitness, senate experiences), which foster mastery and pleasure.	• Enhancing positive image is moved to Step 8. • Instead, there is a focus on appearance checking and appearance fixing ('appearance-preoccupied rituals'; moved from Step 6), and guidance on 'erasing' these, using hierarchies of fixing and checking rituals ('ladder of success'; moved from Step 3).
Step 8	• Helping the individual develop strategies to reduce chances of a setback, cope with high-risk situations, and continue the changes they have made.	• Strategies to reduce chances of a setback, cope with high-risk situations, and continue the changes they have made, are moved to the 'afterword.' • Instead, the individual is asked to write a letter to their body; apologising and thanking it. • Focus on enhancing positive body image, by engaging in activities across different categories (appearance, health and fitness, senate experiences), which foster mastery and pleasure (moved from Step 7).
Afterword		• Helping the individual develop strategies to reduce chances of a setback, cope with high-risk situations, and continue the changes they have made (moved from Step 8).

Historical Influences:

Cultural Socialization

Interpersonal Experiences (e.g., modelling, feedback, appearance teasing)

Physical Characteristics and Changes

Personality (e.g., traits of risk and resilience)

Proximal Influences:

Activating Situations and Events

Body Image Attitudes (Evaluation and Investment)

Body Image Emotions

Cognitive Processing and Internal Dialogues (e.g., thoughts, social comparisons, interpretations, conclusions)

Appearance Schematic Processing
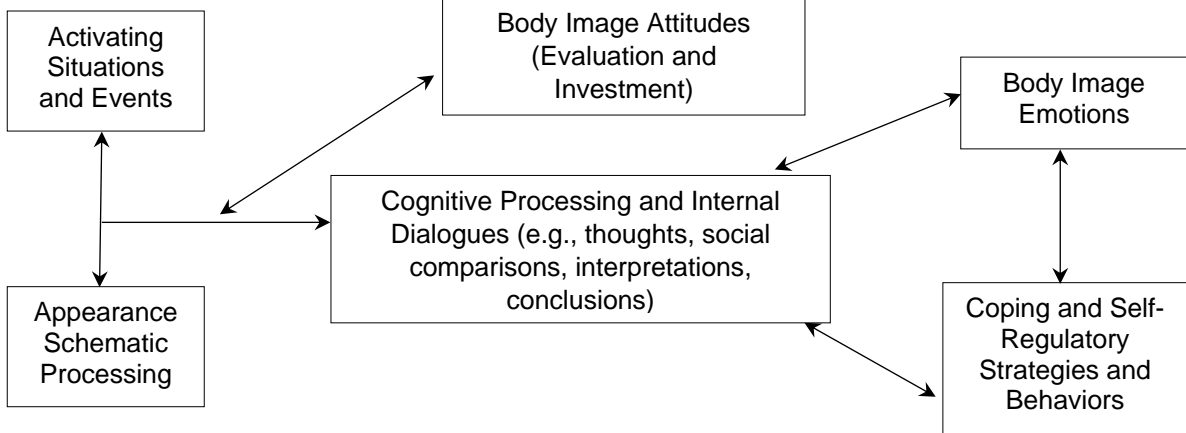
Coping and Self-Regulatory Strategies and Behaviors

Figure 1. Cash's cognitive-behavioral model of body image (Cash, 2012)