The Effect of Music Video Clips on Adolescent Boys’ Body Image, Mood, and Schema Activation

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Abstract

There is limited research that has examined experimentally the effects of muscular images on adolescent boys’ body image, with no research specifically examining the effects of music television. The aim of the current study was to examine the effects of viewing muscular and attractive singers in music video clips on early, mid, and late adolescent boys’ body image, mood, and schema activation. Participants were 180 boys in grade 7 (mean age = 12.73 years), grade 9 (mean age = 14.40 years) or grade 11 (mean age = 16.15 years) who completed pre- and post-test measures of mood and body satisfaction after viewing music videos containing male singers of muscular or average appearance. They also completed measures of schema activation and social comparison after viewing the clips. The results showed that the boys who viewed the muscular clips reported poorer upper body satisfaction, lower appearance satisfaction, lower happiness, and more depressive feelings compared to boys who viewed the clips depicting singers of average appearance. There was no evidence of increased appearance schema activation but the boys who viewed the muscular clips did report higher levels of social comparison to the singers. The results suggest that music video clips are a powerful form of media in conveying information about the male ideal body shape and that negative effects are found in boys as young as 12 years.

Keywords: music television, music video clips, adolescent boys, body image.
Introduction

The media is considered one of the strongest and most important sociocultural influences on body image (Tiggemann and Slater 2004). Whereas women receive pressure to emulate the thin beauty ideal, males are being increasingly exposed to an ideal body shape that is bare-chested, lean, and muscular (Andersen and DiDomenico 1992; Labre 2005). While numerous studies have examined the impact of this idealized body shape in mediums such as television commercials and print advertisements, researchers are beginning to question the impact of arguably one of the most popular forms of entertainment for young people – music television. The aim of this study was to examine the effects of idealized male representations in music television on adolescent boy’s body satisfaction.

Body Image in Adolescence

Adolescence is considered a critical developmental stage for changes to body satisfaction (Eisenberg et al. 2006; Jones and Crawford 2005; Markey 2010), with body image concerns being increasingly reported at a younger age (Cohane and Pope 2001; McCabe and Ricciardelli 2004; Smolak 2004). Although rates of body dissatisfaction tend to be lower in boys than girls, there is still evidence of body dissatisfaction in pre-adolescent and adolescent males (Cohane and Pope 2001; McCabe and Ricciardelli 2004; Smolak 2004). Body dissatisfaction is experienced in a different way in boys compared to girls, with research showing that concerns about both weight and muscularity are independently related to body dissatisfaction in adolescent boys (Jones and Crawford 2005). In Australian studies, boys have reported dissatisfaction with various aspects of their appearance, including their body size (17.5%), body shape (20%), and muscle tone (17.5%; Ricciardelli et al. 2000), and felt that they were too thin (15.4%) or too fat (17.6%; O’Dea and Rawstorne 2001). In turn, body dissatisfaction may prompt the use of body change strategies such as excessive exercise, dietary supplements, or steroid use (O’Dea and Rawstorne 2001; Ricciardelli et al. 2000). For
example. Ricciardelli et al. found that grade 7 and 9 boys used exercise to increase muscle size (55%), or change body shape (42.5%) or size (40%). An increased understanding of the factors that influence adolescent boy’s body image is therefore needed.

**Media and Body Dissatisfaction**

The presentation of the media-prescribed ideal body shape is considered to be one of the key sociocultural risk factors in the development of body dissatisfaction and body change strategies (Labre 2002). These male ideals often depict a level of muscularity that is impossible for most men and boys to achieve by healthy means (Leit et al. 2002), yet are used as a source of social comparison by adolescent boys (Jones 2001). According to Festinger’s (1954) Social Comparison Theory, individuals can fulfill their drive for evaluation through comparison to similar others. However, social comparison has been identified as an important factor in producing body dissatisfaction (Farquhar and Wasylkiw 2007; Hargreaves and Tiggesmann 2004). Research has shown that adolescent boys who compared themselves to muscular images in sports magazines had poorer body satisfaction whereas boys who focused solely on the content actually showed increases in their body satisfaction (Botta 2003). A number of correlational and longitudinal studies have found that internalization and perceived pressure to approximate the ideal shape also contributed to adolescent boys’ body dissatisfaction (e.g., Knauss et al. 2007). Jones (2004) found that strong internalization of the muscular male ideal was one of the best predictors of changes to body dissatisfaction 1 year later. Exposure to video game magazines, which depict hypermuscular male characters, have also been shown to predict increased drive for muscularity 1 year later in White preadolescent boys (Harrison and Bond 2007). Recent meta-analyses have concluded that media-portrayed ideal male images across both correlational and experimental designs have a negative impact on young men’s body satisfaction (Barlett et al. 2008; Blond 2008), although effect sizes are typically “trivial” (Ferguson 2013).
Interestingly, while there is correlational evidence to suggest that young boys are affected negatively by the media-prescribed male ideal, experimental studies have reported few negative effects. These studies typically measure immediate changes to body satisfaction and mood after exposure to idealized male images, and have found no negative effects after viewing television commercials in grade 9 and 10 boys (mean age of 15.60; Humphreys and Paxton 2004) or grade 8 to 12 boys (mean age of 14.30; Hargreaves and Tiggemann 2004). Murnen et al. (2003) found weaker and more inconsistent relationships between measures of body satisfaction and response to idealized still images in 6 to 12 year old boys compared to girls. There is also little evidence of change to mood dimensions such as anxiety and depressive feelings (e.g., Humphreys and Paxton 2004) although Hargreaves and Tiggemann (2004) did find that both boys and girls who viewed idealized images had poorer mood than those who viewed non-appearance images. Researchers have argued that adolescent boys may be less affected by idealised images due to a tendency for males to view the body more in terms of its functional aspects (Farquhar and Wasylkiw 2007), and boys self-reporting a positive or negligible impact of television on their body satisfaction (Hargreaves and Tiggemann 2006; Ricciardelli et al. 2000). Importantly, bodily changes during puberty bring boys closer to approximating the media images (Hargreaves and Tiggemann 2006; Humphreys and Paxton 2004; Labre 2002). Age is therefore an important factor to consider.

**The role of age.** Age differences in response to the media may also affect results in a number of ways that have not been studied carefully. As outlined by Humphreys and Paxton (2004), boys may realise that changes to their body size and shape during puberty will bring them into closer approximation to the muscular ideal and therefore perceive no threat in media images. Alternatively, as males move toward late adolescence and early adulthood, concerns over sexual attractiveness may become more salient. Muscularity concerns, in turn, may render older boys more vulnerable to idealised media images (Hargreaves and Tiggemann...
For example, Hargreaves and Tiggemann (2004) reported negative effects in college-aged men but not adolescent boys in response to the same set of muscular television commercials, while a meta-analysis by Barlett et al. (2008) found that the relationship between media exposure and negative outcomes was stronger in college-aged versus adolescent males. It is tempting, therefore, to conclude that adverse effects are not seen until later developmental periods. However, there is very limited research that has focused specifically on pre- and early-adolescent boys and, as Humphreys and Paxton (2004) outlined, it should not be assumed that this age group responds in the same manner as adult men. Different body image concerns may be found across different age groups and developmental stages (Hargreaves and Tiggemann 2006) and therefore it has been recommended that the effects of the media should be examined from a developmental perspective to determine the onset of social comparison and negative outcomes (Murnen et al. 2003). The current study aimed to provide a more nuanced understanding of the differences in media responsiveness between boys at early, mid and late adolescent development.

**Music television.** Existing media research on young men predominately has focused on magazine advertisements and television commercials. However, correlational studies have suggested that it is not the amount of television viewing per se that is important, but rather the content of the viewing (Schooler and Trinh 2011; Tiggemann 2005). For example, Tiggemann found that although adolescent girls watched significantly more music shows than boys, only in boys was watching music television related to body satisfaction (drive for muscularity). The increasing popularity of music television has resulted in research concerning the impact of this form of media. Music videos clips (MVCs) display violent and aggressive acts (Rich et al. 1998) and have been shown to have adverse effects in domains such as sexuality, gender roles, and alcohol use (Van den Bulck et al. 2006; Ward et al. 2005). Further, evidence suggests that MVCs depicting thin and attractive female singers
negatively affect the body satisfaction of women (Tiggemann and Slater 2004) and late adolescent girls (Bell et al. 2007). To date, only one study has examined the effects of MVCs on males (Mulgrew and Volcevski-Kostas 2012). This study found higher levels of anger and greater body and muscle tone dissatisfaction in men who viewed 5 minutes of MVCs containing images of muscular singers compared to men who viewed clips of scenery or average looking male singers. While MVCs are similar to other forms of media in their depiction of the ideal male body, there are also some important differences. Singers are often important pop culture figures with a fan base who identify with them or try to emulate their look. Further, advertisements or commercials containing still images are typically avoided while MVCs are actively sought (Mulgrew and Volcevski-Kostas 2012). Despite MVCs being one of the most popular forms of entertainment targeted at younger age groups (Tiggemann and Slater 2004), no research has examined the effects on adolescent boys. Music shows are available on free-to-air television in addition to multiple channels dedicated to music and pop culture on cable networks (e.g., MTV, Channel [V] and their affiliates). The most popular channel, MTV, is watched by 75% of 16-24 year olds with 20% reporting watching at least 1 hour per day (Kaiser Family Foundation / MTV, 2003). Australian figures provide lower estimates with Tiggemann (2005) reporting that her sample of adolescent boys watched music television for an average of 1.30 hours per week. The Australian Communications and Media Authority (ACMA; 2008) found that 8 to 17 year old boys spent 7% of their internet time watching or listening to MVCs. Although adolescents may spend more time viewing other forms of media, more experimental research is needed to examine the effects of music clips given the consistency of the detrimental effects found in past research on women and men, the importance of music to youth culture (Council on Communication and Media 2009), and the lack of previous research on adolescent boys.

Schema Theory
Media images may not affect all boys in the same manner. Cognitive-processing models of body image argue that individuals develop appearance-related schemas to organize and guide the processing of self-relevant information (Bemis-Vitousek and Hollon 1990; Tiggemann et al. 2004). Exposure to idealized images can activate these appearance schemas, which in turn can result in negative changes to mood and body satisfaction (Altabe and Thompson 1996; Hargreaves and Tiggemann 2002). According to Hargeaves and Tiggemann (2002), schema theory provides a useful framework for understanding the way in which the media can produce body dissatisfaction.

Schema activation, as measured by the generation of a greater number of appearance-related compared to non-appearance word-stems, has been demonstrated with women, adolescent girls, and adolescent boys in response to viewing thinness-promoting images (Hargreaves and Tiggemann 2003; Tiggemann et al. 2004; Tiggemann and Slater 2004). However, little is known about appearance schema activation in males after viewing muscular images. In one of the first studies to test this theory in men, Mulgrew and Volcevski-Kostas (2012) found no evidence of schema activation in men after viewing muscular male singers in MVCs. The role of appearance schema activation in males therefore remains unclear but warrants further investigation given the importance of this theory in past media research with women. If muscular MVCs do negatively affect adolescent boys, then it is plausible that these effects could be represented cognitively as well as emotionally.

The Current Study

To extend the research on the effects of the media, the aim of the current study was to examine the impact of MVCs on adolescent males’ body satisfaction, mood, and schema activation from a developmental perspective. This was the first study to examine the effects of attractive and muscular male singers as depicted in MVCs on adolescent boys’ body image. Participants viewed 5 minutes of MVCs that depicted male singers of either muscular
and attractive appearance (the “muscular” clips) or singers of more average appearance (less muscular and attractive; the “average” clips). It is important to note the absence of a non-human neutral condition, such as the use of scenery/figure-free advertisements in past research (e.g., Humphreys and Paxton 2004). Ferguson (2013) has argued that comparisons between idealized and average images of females are of greater value than idealized/scenery comparisons. Consistent with this point, we argue that comparison to average-looking singers is a better test of our hypotheses as the primary manipulation of interest was the muscularity and attractiveness of the singers. This allows us to isolate the impact of exposure to muscular images rather than just exposure to any male figure. The secondary variable of interest was age. In line with the recommendation of Bell et al. (2007), the impact of MVCs were tested across different age groups representing early, mid, and late adolescence within the Australian schooling system.

Based on the literature reviewed above, the following hypotheses were proposed. It was first hypothesized that boys who viewed the muscular clips would have poorer body satisfaction and poorer mood than boys who were exposed to the average clips. It was anticipated that these effects would be greatest in the older age group who had reached sexuality maturity (Barlett et al. 2008) (H1). Second, it was hypothesized that greater schema activation, as measured by the completion of a greater proportion of appearance-related word-stems, would be found after viewing the muscular clips (H2). Finally, it was expected that level of comparison to the singers in the MVCs would be greater in the muscular clips. Given that schema activation and social comparison are the hypothesized mechanisms through which the media produces body dissatisfaction, it also was expected that the older age group would score higher on these measures (H3).

**Method**

**Participants**
Participants consisted of 180 males recruited from five co-educational and boys’ Catholic high schools in Melbourne, Australia. Sixty students were recruited from each of three grade levels chosen to represent early, middle, and late adolescence. Participants were in grade 7 ($M = 12.73$ years, $SD = 0.57$), grade 9 ($M = 14.40$ years, $SD = 0.49$) or grade 11 ($M = 16.15$ years, $SD = 0.70$). The average body mass index was 21.00 which is within the healthy range for adolescents and ranged from underweight (15.43) to obese (31.88). Participants were predominately Caucasian (79 %). Of those participants who reported watching MVCs on a weekly basis (70%), the amount of time spent watching music television (either online or televised) was less than 2 hours (70.06%), 3 to 5 hours (15.07%), 6 to 9 hours (7.96%), or more than 10 hours (6.30%).

**Materials**

**Music video clips.** For the selection of the clips, the process used in past research with women (e.g., Bell et al. 2007; Tiggemann and Slater 2004) was adapted for men (Mulgrew and Volcevski-Kostas 2012). A large number of clips were initially taped from Australian music television shows and then shortlisted by the research team. For the experimental condition, clips were sourced that contained attractive and muscular male singers with a strong focus on the body and appearance. Clips in the average condition had to depict more realistic-looking men; that is, men who were less attractive and muscular. Both sets of clips had to focus predominately on the male singers with limited other scenery. Segments of the clips that showed the singers interacting with women were removed to maintain the focus on the singer’s physique (Leit et al. 2002). Although the clips were not specifically matched on the singer’s age or popularity, both sets of clips did contain contemporary musicians who appeared to be less than 30 years of age.

The 24 shortlisted clips were rated by nine males from the local community (mean age in years $= 14.26$, $SD = 1.54$, age range = 12-17 years) on attractiveness (to self and most others),
degree of body focus, and representation of the ideal muscular frame. These participants were blind to the purpose of the study. The videos that received the highest ratings on these four dimensions were selected for inclusion in the muscular condition while clips that contained mid-range ratings were included in the average condition.

Each video went for 5 minutes in total and consisted of 1-minute segments from five different MVCs that had been released and played on popular Australian music shows within the past six years. Therefore, the songs selected were those that male adolescents were likely to be exposed to when watching music television programs. The clips were not played with their accompanying music primarily to reduce the effects of individual tastes in music and stylistic differences across conditions (Bell et al. 2007). Further, the lack of music allows for the effects of exposure to be attributed to the muscular images rather than the potentially mood-altering effects of music. Finally, from a pragmatic point of view, there was difficulty in obtaining continuous 1-minute segments of some clips that did not contain swearing, violence, or sexually provocative interactions with women – themes of which were not deemed appropriate to present within a school setting. The lack of music meant that smaller segments from the song clip could be edited and pasted together to form a continuous 1-minute segment.

**State body dissatisfaction.** In order to assess state changes in body satisfaction resulting from viewing the MVCs, the commonly used Visual Analogue Scales (VAS), based on those of Heinberg and Thompson (1995), assessed pre- and post-test levels body satisfaction. Included were two global measures of body satisfaction – a standard satisfaction with overall appearance scale, in addition to a specific measure of satisfaction with muscle tone, given the importance of muscularity to male body image (e.g., Jones and Crawford 2005). Also included were specific measures of satisfaction with upper body regions (arms, shoulders, chest, and stomach), as adolescent males often report dissatisfaction with these areas (e.g.,
Ata et al. 2007). A review by Blond (2008) found that media images did not exert consistent
effects across all dimensions of body satisfaction, with stronger effects noted for specific
rather than global measures. Multiple measures were therefore included to increase the
sensitivity of the study.

**State mood.** Three mood VAS were also included to assess affective outcomes as a result of
viewing the MVCs. Two negative affect dimensions, anger and depressive feelings, were
chosen in line with past research on women which typically includes measures of negative
mood (e.g., Tiggemann and Slater, 2004) and in particular the past work on men by Mulgrew
and Volcevski-Kostas (2012). A singular measure of positive affect, happy, was also included
(based on Tiggemann and Slater 2004) to account for any mood enhancing effects of the
MVC exposure.

Each body satisfaction and mood scale consisted of a 100 millimeter horizontal line
anchored with *Not at all* and *Very much*. Participants were asked to place a tick along the line
which best represented how they felt at that moment. Numerical anchors were not used in
order to minimize response bias through recalling previous scores, making VAS measures
useful in the measurement of small state changes from pre- to post-test (Heinberg and
Thompson 1995). Individual responses were measured using a ruler, to the nearest
millimeter, and later gathered and converted to a 0 to 100 scale, where 0 indicated the lowest
level and 100 the highest level for each of the constructs. Good psychometric properties of
the VAS have been reported for both the mood and body image measures (Durkin and Paxton
2002; Heinberg and Thompson 1995). Birkeland et al. (2005) reported high test-retest
reliability across a 5-minute period for VAS measuring similar dimensions to those used in
the current study (e.g., depressive feelings = .93, overall appearance dissatisfaction = .84).
Further, VAS measures have previously been used to assess body satisfaction changes in
adolescent males (Humphreys and Paxton 2004).
Social comparison. Based on the work of Tiggemann and Slater (2004), a one-item VAS was used to assess level of social comparison to the singers in the MVCs. Participants were asked “how much did you compare yourself to the singers in the clips?” and were provided with a 100 millimeter line anchored with Not at all and Very much.

Schema activation. The 20-item Word-Stem Completion Task (Tiggemann et al. 2004) was used to assess salience of appearance related information after viewing the MVCs. Participants were presented with three-letter word-stems that could be completed to form either an appearance related or non-appearance related word. For instance, the stem “CHE___” could be completed as “Chest” or “Cheap”. The task is scored by calculating the proportion of appearance related words that were generated with higher scores indicating greater appearance schema activation (Hargreaves and Tiggemann 2002). The word-stem task is a simple but sensitive outcome measure in experimental studies of media exposure and has been used previously used with adolescent boys (Tiggemann et al. 2004).

Demographic form. Basic demographic data (ethnicity, age, height, weight) was obtained using a paper-and-pencil demographic questionnaire.

Procedure

Ethics approval was provided by the Catholic Education Office and the home institution. Information letters and consent forms were distributed to parents and students of five high schools in Melbourne, Australia. Upon receipt of parental and student consent, male students were pseudo-randomly allocated into one of the two conditions. Allocation to video clip condition was conducted at a group level meaning that each individual within the class viewed the same DVD. Initially, each class was randomly assigned a MVC condition by the experimenter selecting a DVD out of a bag on the day of testing. To ensure an approximately even number of participants per condition, allocation became pseudo-random towards the end of testing. That is, the experimenter purposefully selected the DVD containing the muscular
or average MVCs prior to attending the testing session. The DVD selection was based on an inspection of the existing participant numbers in each condition. Participants were not informed of their allocation.

Testing took place in quiet rooms on school grounds during one class period (approximately 45 minutes). Group testing was used, with no more than 10 participants per testing session. Participants were informed that the aim of the study was to examine the relationship between the media and male adolescent health in general. The full nature of the study was not disclosed in order to reduce demand characteristics.

Participants first completed the demographic form followed by the pre-test VAS for mood and body satisfaction. The experimenter then read a scripted set of instructions asking the participants to watch the entire video clip and to refrain from any interaction during the program to avoid distracting or influencing other participants. The appropriate video was then shown for 5 minutes. Immediately following the MVCs, participants were asked to complete the comparison VAS, the post-test appearance and mood VAS, and the word-stem completion task. Upon completion of the study, participants were debriefed about the full nature of the project.

**Results**

**Preliminary Analyses**

Inter-correlations between the VAS measures were run to test the degree of overlap between constructs. The VAS measuring satisfaction with upper body parts (i.e., arms, shoulders, chest, and stomach) were highly inter-correlated with $r$ values ranging from .45 to .77. Therefore, we chose to combine these four VAS scales.

To determine the equivalence of groups prior to testing, a series of 2 (video) X 3 (grade) analysis of variance were conducted on body mass index and pre-VAS scores. There were no differences between the video clips or grade levels on pre-VAS scores (all $ps > .05$).
However, there was a significant main effect of video clip for body mass index, $F(1, 174) = 13.98, p < .001$, Cohen’s $f = 0.25$, with boys in the muscular clip condition having a higher body mass index ($M = 21.74, SE = 0.29$) than boys in the average clip condition ($M = 20.21, SE = 0.29$). Body mass index was therefore included as a covariate in all analyses.

A series of 2 (video) X 3 (grade) analyses of covariance were then conducted to test for differences in post-VAS scores on mood (happiness, depressive feelings, anger) and body satisfaction (muscle tone satisfaction, overall body satisfaction, and satisfaction with upper body). The between-groups independent variables were video type (muscular vs. average singers) and grade level (7, 9, 11) while body mass index and pre-test VAS scores were entered as covariates. A Bonferroni adjustment was applied to the post-hoc tests. G*Power (Erdfelder et al. 1996) was used to calculate Cohen’s $f$ values. Table 1 shows the adjusted post-test scores across the five VAS as well as the $F$ values from the analyses of covariance.

**Effects of MVCs on Mood**

For happiness, there was a significant main effect of grade and a main effect of video clip but no significant interaction. The main effect of video clip showed that boys who were exposed to the muscular clips felt significantly less happy ($M = 57.10, SE = 2.17$) than boys who viewed the average clips ($M = 66.50, SE = 2.17$). The main effect of grade level showed that the grade 11 boys ($M = 55.02, SE = 2.61$) had significantly lower levels of happiness than the boys in grade 7 ($M = 66.36, SE = 2.61, p = .002$) and grade 9 ($M = 64.03, SE = 2.60, p = .01$).

For the depressive feelings measure, there was no main effect of grade, a significant main effect of video clip, but no significant interaction. The main effect of video clip showed that boys who viewed the muscular clips had significantly higher levels of post-test depressive feelings ($M = 19.94, SE = 1.83$) than boys who watched the average clips ($M = 1
There was no main effect of grade or video, and no significant interaction for the anger measure.

**Effects of MVCs on Body Image**

For satisfaction with muscle tone, there was a significant main effect of grade but no main effect of video clip or grade by video clip interaction. The grade main effect was driven by the grade 7 boys ($M = 58.18, SE = 2.57$) having a higher post-test score on muscle tone satisfaction than the grade 11 boys ($M = 48.72, SE = 2.57, p = .01$).

For satisfaction with overall appearance, there was a main effect of video clip but no main effect of grade or interaction effect. The boys who viewed the muscular clips had significantly lower post-test satisfaction with their overall appearance ($M = 58.30, SE = 1.69$) than the boys who viewed the average clips ($M = 63.14, SE = 1.69$).

Finally, for satisfaction with upper body there was a main effect of video clip but no main effect of grade or significant interaction. The boys who viewed the muscular clips had significantly lower post-test satisfaction with their upper body ($M = 53.37, SE = 1.43$) compared to the boys who viewed the average clips ($M = 59.51, SE = 1.43$).

Please insert Table 1 about here

**Schema Activation**

A 2 (video clip) X 3 (grade level) independent groups factorial analysis of covariance was used to test whether the males exposed to the muscular MVCs would produce a greater proportion of appearance-related word-stems compared to the males exposed to the average MVCs. There was no main effect of video clip, $F(1, 172) = 3.20, p > .05, f = 0.13$, no main effect of grade, $F(2, 172) = 0.60, p > .05, f = 0.08$, and no significant interaction, $F(2, 172) = 1.13, p > .05, f = 0.11$, showing that the groups did not differ on schema activation after viewing the MVCs.

**Social Comparison**
A 3 (grade) X 2 (video clip) analysis of covariance was conducted in order to test whether exposure to the muscular MVCs encouraged social comparison. There was a significant main effect of video clip, $F(1, 173) = 15.57, p < .001, f = 0.30$, which showed that social comparison was higher in the muscular clip condition ($M = 33.19, SE = 2.62$) compared to the average clip condition ($M = 18.24, SE = 2.62$). The main effect of grade, $F(2, 173) = 6.37, p = .002, f = 0.27$, showed that social comparison was greater in the grade 11 boys ($M = 33.37, SE = 3.15$) compared to the grade 7 boys ($M = 17.44, SE = 3.16, p < .001$). There was no significant interaction, $F(2, 173), = 1.86, p > .05, f = 0.15$.

**Discussion**

Schooler and Trinh (2011) claimed that “media use is an integral facet of the adolescent experience” (p. 40); yet, there has been very little research examining the effects of male idealized images from an experimental framework. This is the first study to examine whether muscular and attractive singers in MVCs affect adolescent boys. In short, the results show that these MVCs can produce lower body satisfaction and lower mood compared to viewing MVCs containing average-looking male singers. There was no evidence of appearance schema activation, although the boys in the muscular condition did report higher levels of social comparison to the clips. Taken together, these results challenge the conclusion of other researchers who report that muscular media representations do not affect adolescent boys.

**Effects of MVC Exposure**

The first aim of the study was to examine the effects of MVCs, a previously unexamined form of media in adolescent boys. Exposure to a 5 minute clip of muscular and attractive singers resulted in lower levels of happiness, lower overall appearance satisfaction, lower upper body satisfaction and higher levels of depressive feelings compared to boys who watched MVCs containing average-looking male singers. The first hypothesis was therefore
supported, although no differences in muscle satisfaction were found. Given that the two video conditions differed on the level of muscularity and that muscularity concerns are a central component of body image in adolescent boys (e.g., Jones and Crawford 2005; Ricciardelli et al. 2000), it is surprising that the groups did not differ on muscle tone satisfaction. However, a review by Blond (2008) found that exposure to idealized images of males produced greater effects on measures of satisfaction with specific body parts compared to global body or muscle satisfaction measures. Upper body satisfaction may therefore be a more sensitive measure of boys’ body image (Blond 2008) and should be included as an outcome variable in future media studies.

The difference in findings between our study and previous research may be due to the content and nature of the experimental stimuli used. Past research on adolescent boys using an experimental design has focused on still images (Murnen et al. 2003) and television commercials (Hargreaves and Tiggemann 2004; Humphreys and Paxton 2004) incorporating either non-figure or non-ideal appearance control groups. These studies have reported no adverse effects on boy’s body satisfaction. MVCs may therefore be a more powerful conveyer of social norms around the male ideal body shape. Adolescent boys may identify more strongly with singers who have a celebrity status and are likely discussed in popular youth culture. Comparatively, male models in other media are often anonymous or unknown. Support for this argument comes from research that has shown that different program types have differential effects on body satisfaction (Schooler and Trinh 2011; Tiggemann 2005), with Tiggemann reporting that the consumption of music television was related to drive for muscularity in adolescent boys. Additionally, music and music culture are important in adolescence and therefore viewing MVCs is typically a naturalistic (Tiggemann and Slater 2004), purposeful activity rather than coincidental viewing as in the case of advertisements (Mulgrew and Volcevski-Kostas 2012).
The negative effects found in the current study are consistent with past research that also has reported poorer body satisfaction in women and men who view brief presentations of idealised images in MVCs (Bell et al. 2007; Mulgrew and Volcevski-Kostas 2012; Quigg and Want 2011; Tiggemann and Slater 2004). Although there only have been a small number of studies to date, the consistency of the results suggest that idealized representations in MVCs may be more detrimental than other media types. Future research is needed to replicate these findings and to establish whether there are differences between experimental presentations of MVCs and other forms of media. Adolescents and young adults are the highest consumers of music television and are likely to actively seek out music television as a form of entertainment and socialization (Tiggemann and Slater 2004). Therefore, future research may wish to examine ways to reduce the detrimental effects of MVCs. For example, Quigg and Want (2011) successfully have shown that providing women with information about the artificial nature of modeling photos mitigated the negative effects of MVCs. It would be worthwhile to trial this intervention with young males.

Schema Activation and Social Comparison

Two theoretical mechanisms were tested in the current study: social comparison and appearance schema activation. There was no evidence of appearance schema activation as boys in both conditions produced a similar number of appearance-related word-stems. Therefore, the second hypothesis was not supported. Previous research has found evidence for appearance schema activation in boys after viewing thinness-promoting images (Hargreaves & Tiggemann 2003; Tiggemann et al. 2004). However, Mulgrew and Volcevski-Kostas (2012) found no evidence of schema activation in adult men who viewed muscular MVCs. They argue that the word-stem completion task may only measure generalist or thin-ideal schemata, as a large number of items are more relevant to women’s body image concerns than men’s concerns. Therefore, the lack of evidence for schema activation in boys
may simply reflect measurement error. The development of a male-version of the task would help to test this idea. The alternative argument is that muscular images in MVCs do not activate appearance schemas. Body image is thought to consist of separate cognitive and affective components (e.g., Cash and Green 1986). It may be that males do not cognitively process idealized images to the same extent as females although both sexes still show changes to affective states. In support of this idea, Agliata and Tantleff-Dunn (2004) have suggested that males may “interpret these messages at face value without filtering them through a pre-existing internal set” (pg. 18). A final alternative is that appearance schemas were similarly activated in response to both type of clips but the absence of a non-figure neutral condition meant that no significant effects emerged. Further research would help to clarify these issues.

The second theoretical perspective was social comparison. Boys who viewed the muscular MVCs had higher ratings of social comparison than boys who viewed the clips containing average-looking singers, which provided support for the third hypothesis. Social comparison has been implicated as an important mechanism underlying the processing of the media images and producing body dissatisfaction (Farquhar and Wasylkiw 2007). Past research has shown that males and females who report comparison with idealized images report greater levels of body dissatisfaction (Botta 2003; Hargreaves and Tiggemann 2004). Although boys have reported that they do not compare themselves to images in the media (Hargreaves and Tiggemann 2006; Ricciardelli et al. 2000), the current results suggest that when they do engage in social comparison, the outcome is lowered mood and body satisfaction. It should be noted that only a general measure of social comparison was used as opposed to a specific measure of appearance comparison. It may therefore be that boys are more comfortable in reporting general comparison to singers rather than appearance-focused
comparisons. Regardless, these results suggest that interventions aimed at reducing social and/or appearance comparison may be useful.

Instructional set may influence the degree of social comparison to images - a process that may account for the differences in findings between the current study and past research. For example, Humphreys and Paxton (2004) found no negative effects in boys who viewed advertisements containing images of the muscular-ideal. However, the boys were asked to rate the appeal of advertisements, which may have shifted their attention away from the appearance content. Botta (2003) suggested that mere exposure to idealized images is not sufficient to induce body dissatisfaction; instead, it is only when boys actively engage in social comparison that negative effects occur. It is therefore possible that, in the absence of specific viewing instructions in the current study, the boys were more likely to engage in social comparison.

The Role of Age

A final aim of the study was to examine developmental differences in response to the muscular MVCs with the expectation that the effects would be strongest in the older age group. Specifically, we chose three grade levels within the Melbourne schooling system that represented early, mid, and late adolescence. No significant age by video type interactions were noted although the year 11 boys did report poorer levels of happiness and poorer muscle tone satisfaction compared to the younger boys, regardless of which video they viewed. These results suggest that, although older boys will show some negative effects of viewing any MVCs containing male figures, globally, exposure to muscular MVCs produce the same outcome in 12-, 14-, and 16-year old boys. This outcome was surprising given that the three groups are thought to be experiencing quite different developmental challenges. When these findings are combined with past media research, it appears that boys as young as 12 years are affected in much the same way as adult men when exposed to attractive and muscular male
models. Furthermore, the current study has shown that comparison with models starts early and persists until later adolescence. Future research may wish to study boys younger than 12 years to determine the onset of social comparison and response to media images.

Limitations

A number of calls have been made by researchers to increase our understanding of adolescent boys’ body image (e.g., Markey 2010) and specifically to examine the effects of MVCs across different adolescent time periods (Bell et al. 2007). This study has provided a preliminary investigation of these issues. However, a number of limitations should be noted. First, there are a number of problems inherent to media research. These limitations include issues around the artificial nature of concentrated viewing (Hargreaves and Tiggemann 2003; Quigg and Want 2011) and possible contextual differences between how the singers were depicted in the two sets of clips, such as clothing style, design of the clips etc. (Diedrichs and Lee 2010). Only 5 minutes of MVCs were shown due to time constraints and therefore more pronounced effects may be found with longer viewing sessions. Music was not presented with the clips for pragmatic reasons outlined earlier and it is therefore unclear whether including the accompanying music would alter the results. A second set of limitations concerns the nature of the sample. True random assignment to conditions was not possible within the constraints of the school setting and the nature of group-based testing means that social desirability effects may be present. Only Catholic schools were sampled so it is unclear whether there was any interaction between religiosity and body image. Future research should aim to replicate these findings in a more diverse sample. Finally, Farquhar and Wasylkiw (2007) have argued that negative effects after exposure to media images may be due not only to the muscular nature of the images but also to the way in which the body is presented. They reported that adolescent males had poorer performance and appearance self-esteem after viewing images that focused on the aesthetic attributes of the models (i.e.,
viewing the body as an object) compared to males who viewed images that focused on the instrumentality of the model (i.e., viewing the body as a process). Therefore, the effects of MVCs may be driven by the aesthetic representation of the singers rather than the level of attractiveness per se. Future research could examine these representations within the context of MVCs.

**Implications and Summary**

Although further replication is needed, these preliminary findings raise a number of important implications for parents and educators. The American Academy of Pediatrics have recently released a policy statement (Council on Communication and Media 2009) that summarizes the effects of music television on children and adolescents, calls for more research, and makes a number of recommendations for parents and pediatricians. Of particular note are the recommendations that parents have a more active involvement in the music consumed by their children and calls for the music industry to provide better role models and produce more MVCs with positive themes. Increased knowledge about the effects of the MVCs is an important first step in achieving these aims. The results also raise several important implications for future media study. Researchers should be cautious in assuming that all forms of media have an equal impact on boy’s body satisfaction. The current results suggest that MVCs are a particularly influential form of mass media either because there is something unique in the self-presentation of singers (versus other models) or because of the popularity of the music and music television generally. Additionally, the effects found in the current study were across all boys who viewed the muscular images rather than just those who scored highly on a particular vulnerability factor. This suggests that all young boys are potentially impacted by idealized images in MVCs.

In summary, the results showed that boys who viewed 5 minutes of MVCs containing muscular and attractive singers had poorer body satisfaction and poorer mood compared to
boys who viewed average-looking singers. This effect was potentially due to the increased social comparison noted in the former group. The lack of age differences suggests that negative effects are occurring in boys as young as 12 years of age and remaining until at least 16 years of age. These findings build upon past research into boy’s body image by identifying MVCs as an important external trigger of body dissatisfaction.
References


Kaiser Family Foundation / MTV (2003). *Reaching the MTV generation: recent research on the impact of the Kaiser Family Foundation / MTV public education campaign on*


Table 1

Mean (and SE) Post-Test Mood and Body Image VAS Across Grade and Video Type.

<table>
<thead>
<tr>
<th></th>
<th>Muscular Video</th>
<th>Average Video</th>
<th>F-value and effect size (Cohen’s f)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Happiness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness</td>
<td>61.83 (3.71)</td>
<td>62.07 (3.70)</td>
<td>47.42 (3.72)</td>
</tr>
<tr>
<td>Depressive feelings</td>
<td>16.80 (3.14)</td>
<td>22.92 (3.12)</td>
<td>20.11 (3.17)</td>
</tr>
<tr>
<td>Anger</td>
<td>22.01 (3.28)</td>
<td>23.84 (3.28)</td>
<td>15.99 (3.34)</td>
</tr>
<tr>
<td>Satisfaction with upper body</td>
<td>57.31 (2.45)</td>
<td>52.38 (2.45)</td>
<td>50.43 (2.45)</td>
</tr>
<tr>
<td>Muscle tone satisfaction</td>
<td>56.99 (3.67)</td>
<td>53.29 (3.65)</td>
<td>46.00 (3.66)</td>
</tr>
<tr>
<td>Overall appearance satisfaction</td>
<td>61.49 (2.89)</td>
<td>56.87 (2.88)</td>
<td>56.56 (2.90)</td>
</tr>
</tbody>
</table>

Note. Means are covariate adjusted.
* p < .05. ** p < .01.