

Celebrity influence on body image and eating disorders: A review

Journal of Health Psychology
2022, Vol. 27(5) 1233–1251
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DOI: 10.1177/1359105320988312
journals.sagepub.com/home/hpq


Zoe Brown  and Marika Tiggemann

Abstract

Celebrities are well-known individuals who receive extensive public and media attention.

There is an increasing body of research on the effect of celebrities on body dissatisfaction and disordered eating. Yet, there has been no synthesis of the research findings. A systematic search for research articles on celebrities and body image or eating disorders resulted in 36 studies meeting inclusion criteria. Overall, the qualitative, correlational, big data, and experimental methodologies used in these studies demonstrated that exposure to celebrity images, appearance comparison, and celebrity worship are associated with maladaptive consequences for individuals' body image.

Keywords

body image, celebrity, disordered eating, media, review

Introduction

When Lady Gaga announced her struggle with an eating disorder online in 2012, the number of internet searches for pro-anorexia websites increased by 52% (Lewis et al., 2016). Similarly, online platforms have been used by other celebrities to disclose their eating disorders (e.g. Kesha and Demi Lovato) and also to promote the latest body image fads, such as the Kylie Jenner Lip Challenge and Gwyneth Paltrow “Elimination Diet” (Moyer, 2015; Stechyson, 2018). In addition, multiple news headlines suggest that celebrities can heavily influence body image and disordered eating (e.g. “Social media and celebrity culture ‘harming young people’”, Parveen, 2018). But what does the actual research on celebrities, body image, and disordered eating tell us? **Here we seek to answer this question by providing a synthesis of the existing body of research.**

Celebrities are famous individuals who receive excessive public attention. Female

celebrities feature predominantly in contemporary media and often represent the epitome of media cultural beauty ideals. As current beauty ideals emphasize thinness for women, it has been argued that this constant presentation of celebrities reinforces an unachievable thin ideal and leads to increased body dissatisfaction (Brown and Tiggemann, 2016; Maltby et al., 2005). Body dissatisfaction has a number of maladaptive consequences for both physical and mental health, including depression and eating disorders (Dakanalis et al., 2013; Stice and Shaw, 2002; Uchoa et al., 2019). While there are a number of sociocultural factors that influence body image, the mass media are by far the most influential. In support, an extensive

Flinders University, Australia

Corresponding author:

Zoe Brown, School of Psychology, Flinders University,
GPO Box 2100, Adelaide, SA 5001, Australia.
Email: zoe.brown@flinders.edu.au

body of historical research has established the link between exposure to thin idealized media imagery and body dissatisfaction (Grabe et al., 2008; Groesz et al., 2002; Levine and Murnen, 2009; Want, 2009). However, this research has largely focused on fashion models in fashion magazines.

Celebrities differ from fashion models in that they are not anonymous figures. In addition to photographs of celebrities, stories about their personal lives are pervasive throughout the media. This access to private information about celebrities has resulted in some people becoming deeply involved in the lives of celebrities and imagining themselves as having a special relationship with them, a connection referred to as celebrity worship (Maltby et al., 2005).

Images of thin and attractive female celebrities are accessible across a variety of different media platforms. First, celebrities are often seen in magazines, on television and in other forms of traditional media. In addition, many celebrities have branched out online. Second, there has been the emergence of Internet celebrities (also known as “Influencers” or “Instacelebs” on Instagram), people who become solely famous through the internet and social media. In May 2019, 6 out of the top 10 most followed Instagram accounts were thin, toned and attractive female celebrities (Ariana Grande, Selena Gomez, Kim Kardashian, Kylie Jenner, Beyonce, and Taylor Swift), with the other four accounts being three attractive male celebrities (Cristiano Ronaldo, Dwayne “The Rock” Johnson, and Leo Messi) and Instagram’s own account (Social Blade, 2018). These thin and attractive online celebrities are frequently touted as providing sources of “thin-spiration” and “fitspiration” (amalgamations of the words “thin”/“fit” and “inspiration”) for individuals to aspire to an idealized body type, including inspiration for weight loss.

The commonly accepted framework for explaining the effects of media exposure on body image and eating behaviors is social comparison theory. Social comparison theory (Festinger, 1954) argues that humans have an innate drive to compare themselves with others in order to make evaluations about their abilities and opinions,

especially when objective measures do not exist. Celebrities, like fashion models, present an idealized comparison target, with most women failing to achieve the set standard. Consequently, women feel negatively about themselves and their bodies. Nevertheless, women do compare themselves to models and celebrities because they set the standard for cultural norms of thinness that women know that they will be judged against (Strahan et al., 2006).

Despite the visibility of celebrities in both traditional and online media, research on the effect of celebrities on body dissatisfaction and eating disorders is limited and goes across a number of different methodologies. As yet, there has been no examination or synthesis of the available research findings. The present paper aims to review the body of empirical research that has investigated the influence of celebrities on body image and eating disorders. In so doing, the paper aims to consolidate the findings to determine any gaps and offer suggestions for further research. Due to their enormous reach, it is important to gain a better understanding of celebrities’ potential harmful impact on body image and disordered eating in order that future research might seek to mitigate or reduce that impact.

Method

Search strategy

To identify papers for review, a literature search was conducted in February 2020 (including all articles up until this date) using comprehensive searches on the electronic databases: PsycINFO, PubMed, CINAHL, ProQuest and Google Scholar. The databases were searched using the keywords: *celebrities* OR *celebrity* AND (based on Holland and Tiggemann, 2016) *eating disorder* OR *disordered eating* OR *body image* OR *body dissatisfaction* OR *drive for thinness* OR *drive for muscularity* OR *thin ideal* OR *bulimia nervosa* OR *anorexia* OR *binge eating* OR *social comparison* to locate relevant publications in all journals. References of the collected articles were also scanned for additional relevant studies.

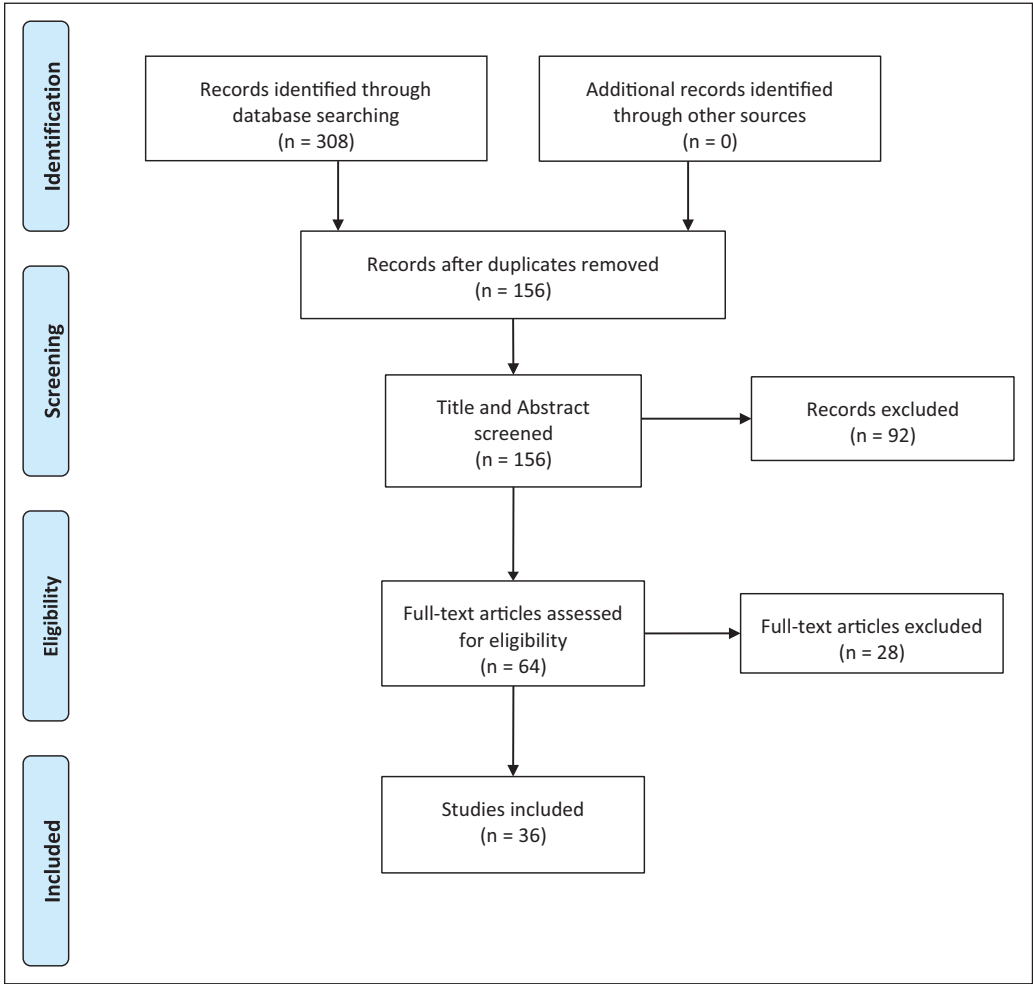


Figure 1. Search strategy.

Selection criteria

The search strategy generated a total of 308 articles (see Figure 1 for a diagrammatic representation of the search strategy). Following PRISMA guidelines, identified duplicates were first removed ($n = 152$). Second, title and abstracts were screened for inclusion criteria, leading to the exclusion of a further 92 records. Finally, the full text of articles was examined, leading to the retention of 36 articles. To be included in the review, articles needed to be written in English, be a peer reviewed published research study (e.g. excluding abstracts, commentaries, book

chapters, and dissertations), and needed to have at least one measure/self-report or experimental manipulation of celebrities and one measure of body image or disordered eating. Studies with both male and female participants were included to highlight whether the findings apply across gender. Studies with only pregnant women as participants were excluded as findings would not be applicable to the general population.

All retrieved articles were screened and findings extracted by the first author. After title and abstract screening, the remaining 64 full text articles were independently read and screened by the second author. The resulting kappa

coefficient of $k=0.97$ indicates *almost perfect* agreement, with the two disagreements resolved by discussion. The extrapolated study results were synthesized based on methodology used (e.g. qualitative, correlational), with full agreement between the two authors on categorization of methodology.

Results and discussion

Selected journal articles

Of the 36 journal articles meeting all inclusion criteria, six consisted of qualitative studies, 15 were correlational studies (with two including a longitudinal component), five were “big data” analyses of internet or print media information, and the remaining 10 used experimental designs. Of the 31 studies with live participants, 21 had only female participants, one had only male participants, and nine included both men and women. Most studies had adult populations ($n=22$), mostly with university samples ($n=17$), but eight studies involved adolescents, and one study compared adolescents and adults. Most of the studies were conducted in western countries (USA, UK, Australia, Canada, $n=23$), with primarily Caucasian samples. See Tables 1 to 4 for more detailed information on the included samples.

Qualitative research

The qualitative studies (see Table 1) aimed to examine the self-reported factors that influence body image. The research was conducted mostly using group discussions on body image, with both adolescent ($n=4$) and adult ($n=2$) samples.

In the studies with adolescent samples, girls reported that celebrities greatly influenced their body image (Dowds, 2010; Mooney et al., 2009; Romo et al., 2016), that celebrities promote thinness, and that the girls were inspired to look like them (Mooney et al., 2009). A content analysis of 11 Portuguese pro-anorexia blogs written by adolescents found that celebrity images were being used as “thinspiration” (something or someone that serves as motivation or inspiration

to lose weight or become thin) (Castro and Osorio, 2013).

Similar reports of idealization of and comparison to celebrities were found for adult women. Specifically, El Jurdi and Smith (2018) and Webb et al. (2013) found that adult women reported being greatly influenced by celebrities, comparing their appearance to celebrities, and desiring to conform their body to the ideal standard promoted by celebrities. Thus, the primary themes that emerged from the qualitative research in this review were that both women and girls reported striving for the thin ideal body type promoted by celebrities and comparing themselves to celebrities.

Correlational research

The correlational research (see Table 2) aimed to investigate the relationship between celebrity variables and body image or eating disorder attitudes. The main celebrity variables examined were comparing oneself to celebrities and worshipping celebrities.

Six correlational studies focused on the influence of comparisons with celebrities on body image and eating disorder attitudes. In these studies, frequency of comparison was investigated by either purpose-built questions or adaptations of the Physical Appearance Comparison Scale (Thompson et al., 1991). Predominately, the research showed that there was a harmful relationship between celebrity comparison and body image concerns and eating disorder attitudes for both girls and adult women (Fardouly and Vartanian, 2015; Fardouly et al., 2015, 2018; Ho et al., 2016; Jones, 2001). However, Chae (2017) found that comparisons to celebrities by adult women were not related to facial appearance satisfaction (they did not have a measure of overall body dissatisfaction).

In addition, all six studies included measures of comparison with peers. Overall, the studies found that women and girls compared themselves with both peers and celebrities (Chae, 2017; Fardouly and Vartanian, 2015; Fardouly et al., 2015, 2018; Ho et al., 2016; Jones, 2001).

Table 1. Qualitative studies.

Author (year)	Ethnicity/country of study	Sample (N), % female	Source of sample	Age	Procedure	Celebrity measure	Body image measure	Key findings
Castro and Osorio (2013)	Portugal	11 blogs (81%)	Online recruiting	13–19	Content analysis of 11 Portuguese pro-anorexia blogs	Discussion topic: celebrities	Eating disorder related blogs	Two main categories of content: (1) images of celebrities and models that young people worship as thinpiration, and (2) information about how youth deal with parental, peers and social and cultural pressures. Celebrity pictures work as a stimulus for maintaining diets, starving and weight loss. Celebrities influence what it means to be attractive. Girls discussed the influence of celebrities on body image more than boys.
Dowds (2010)	UK; Caucasian (92.7%)	96 (60%)	Youth groups and schools	13–18	Group discussions	Discussion topic: celebrities	Discussion about body image	Girls discussed the influence of celebrities on body image more than boys. Women compared their appearance to celebrities as celebrities perpetuate a beauty ideal. Women learn about celebrity's life experiences, which encourages comparison.
El Jurdi and Smith (2018)	Lebanon	16 (100%)	Community	18–45	Individual interviews	Asked to bring and discuss photos of people they found beautiful	Discussion about body image and beauty	Girls believed celebrities promoted thinness and aspired to look and be like the celebrities
Mooney et al. (2009)	Ireland	124 (100%)	Schools	15–16	Group discussions	Discussion prompt: the role of celebrities in promoting body image	Discussion about body image	Influencing factors on body image: male attention, media, and peers Two thirds of girls stated that curvy body celebrities influenced their ideal body shape. They did not express any desire to emulate overly thin European American models or celebrities.
Romo et al. (2016)	Mexican–American (100%)	27 (100%)	Schools	14–16	Individual interviews	Discussion topic: celebrities	Discussion prompt: Latino body image vs. white body image	African American women perceived that European Americans conformed their body image to the extreme celebrity standard. African American women described these celebrities in extreme terms (i.e. sickly, anorexic).
Webb et al. (2013)	USA; Caucasian (54%), Black (46%)	35 (100%)	University	Mean 20.4	Ethnic-specific focus groups	Discussion topic: celebrities	Pulvers' Figure Rating Scale; Body image topics discussed	

Table 2. Correlational studies.

Author (year)	Ethnicity/ country of study	Sample (N), % Female	Source of sample	Age	Procedure	Celebrity measure ^a	Body image Measure ^a	Key findings
Aruguete et al. (2014)	USA; Caucasian (61%)	279 (68%)	University/ college students	17–53	Questionnaire	CAS	SOQ EAT-26	Celebrity worship and eating disorder attitudes were positively correlated but only for men. No relationship between celebrity worship and objectification.
Chae (2017)	Korean (100%)	1064 (wave 1); 782 (wave 2) (100%)	Online recruiting	20–39	2 questionnaires (1 month apart)	Comparison to celebrities	Satisfaction with facial appearance	Comparison to celebrities did not predict editing behavior or satisfaction with facial appearance. Women compared more with peers than celebrities. Selfie taking and social media use were correlated with celebrity comparison.
Fardouly et al. (2015)	UK; Caucasian (76%)	150 (100%)	University	17–25	Questionnaire	Comparison to celebrities	SOQ	Compared more to peers than to celebrities.
Fardouly and Vartanian (2015)	Australia; Caucasian (46.3%), Asian (41.9%)	227 (100%)	University	Mean 19.13	Questionnaire	Comparison to celebrities	EDI	Comparison to celebrities was positively correlated with self-objectification but not Facebook usage. Compared most to distant peers, same to celebrities and peers, and least to family. Rated their body most negatively when comparing to celebrities.
Fardouly et al. (2018)	USA and Australia; Caucasian (71.4%)	276 (100%)	University and Online recruiting	18–25	Questionnaire	Comparison to celebrities	EDI, SOQ	Comparison frequency to celebrities was positively correlated with both EDI subscales. Direction of comparison (upward) to celebrities mediated the effect of Facebook usage on body image Compared more to peers and celebrities than to strangers and family. Comparison to celebrities was positively correlated with both EDI scales and self-objectification. Comparison to celebrities mediated the effect of Instagram usage on self-objectification.

(Continued)

Table 2. (Continued)

Author (year)	Ethnicity/ country of study	Sample (N), % Female	Source of sample	Age	Procedure	Celebrity measure ^a	Body image Measure ^a	Key findings
Ho et al. (2016)	Singapore	1059 (46%)	Schools	12–19	Questionnaire	Comparison to celebrities, CAS	EDI	Social comparison with celebrities was correlated with body image dissatisfaction and drive for thinness. Celebrity worship was positively associated with body dissatisfaction. Comparing to peers on social media has a stronger relationship to body image concerns than comparing to celebrities. Girls were equally likely to compare to peers and celebrities/models for weight, and boys and girls for shape/build and face. Body dissatisfaction and comparison to celebrities for height, weight, shape, and face were correlated for both boys and girls but the effect for girls was stronger. US participants had higher scores of celebrity worship than South Korean participants.
Jones (2001), Study 2	USA; Caucasian (71 %)	174 (54%)	Schools	9 & 10th grade	Questionnaire	Comparison to celebrities/ models and peers	EDI; Body Dissatisfaction	US participants: body dissatisfaction was negatively associated with acceptance for cosmetic surgery, and celebrity worship was positively associated with acceptance for cosmetic surgery. Perceived pressure from celebrity's social networking sites significantly predicted body dissatisfaction (in both muscularity and fat) and eating disorder behaviors. Internalization was found to mediate the effect of perceived pressure from celebrities on body dissatisfaction
Jung and Hwang (2016)	Korea/USA; Korean (53%), Caucasian (40%)	370 (100%)	University	K: Mean 21.9, US: Mean 20.3	Questionnaire	CAS	ACSS, FRS, BAS, SATAQ	Intense-personal celebrity worship predicted incidence of elective cosmetic surgery at time 2.
Lee and Lee (2019)	Korean	427 (0%)	Online recruiting	20–39	Questionnaire	PSPS-M	MBAS, DMS, SATAQ, EAT	Intense-personal celebrity worship was significantly correlated with body image preoccupation.
Maltby and Day (2011)	UK; Caucasian (44.5%), Black (28.5%)	137 (63%)	Community	18–23	Time 1: measures given; Time 2: (8 months later): report whether they had undergone cosmetic surgery within that time period	CAS	BSQ-R, ACSS, Personal experience of cosmetic surgery	

(Continued)

Table 2. (Continued)

Author (year)	Ethnicity/ country of study	Sample (N), % Female	Source of sample	Age	Procedure	Celebrity measure ^a	Body image Measure ^a	Key findings
Maltby et al. (2005)	UK; Caucasian (67%)	701 (55%)	Schools, University, Community	14–60	Questionnaires to 3 samples: adolescents, university students, adults	CAS	ABS; BSQ-R	Girls: correlations found between intense-personal and pathological celebrity worship and attention to body shape and body shape preoccupation. Relationship between intense-personal celebrity worship and attention to body shape is apparent at age 14, heightens at age 15, lowers at age 16 and disappears from the age of 17 onwards. Girls with higher entertainment-social celebrity worship have more positive body image. No effect of other types of celebrity worship on body appreciation.
Narula and Varma (2018)	Thailand	250 (100%)	Schools	13–19	Questionnaire	CAS	BAS	Self/celebrity body-shape discrepancy linked to diet, bulimia, and oral control scales independent of personal body-shape and self/ideal discrepancies. Bulimia subscale scores: relationship was moderated by a more favourable perception of the celebrity relative to the self.
Shorter et al. (2008)	UK	159 (100%)	University	18–27	Questionnaire	FRS, Perceived favourability of the celebrity	EAT	Positive correlation found between body dissatisfaction and internalization, and entertainment-social celebrity worship and intense personal celebrity worship.
Swami et al. (2011)	UK; Caucasian (63.6%)	401 (100%)	University	18–50	Questionnaire	CAS	FRS, SATAQ	Body dissatisfaction predicted by internalization (20%), BMI (15%), celebrity worship (1%) and Emotional Stability (1%).
Utami (2019)	Indonesia	111 (not reported)	Schools	Adolescents	Questionnaire	CAS	MBSRQ	A significant negative correlation was found between body image concerns and celebrity worship.

Note: Measure Abbreviations: ABS: Attention to Body Shape Scale; ACSS: Acceptance of Cosmetic Surgery Scale; BAS: The Body Appreciation Scale; BSQ-R: Body Shape Questionnaire-Revised; CAS: Celebrity Attitude Scale; DMS: Drive for Muscularity Scale; EAT: Eating Attitudes Test; EDI: Eating Disorder Inventory; FRS: Figure Rating Scale; MBAS: Male Body Attitudes Scale; MBSRQ: Multidimensional Body-Self Relations Questionnaire; PPS-M: Perceived Sociocultural Pressure Scale (for men); SATAQ: Sociocultural Attitudes Toward Appearance Questionnaire; SOQ: Self-Objectification Questionnaire.

The findings were mixed about the strength of the relationship between comparisons and eating disorder attitudes. Fardouly and Vartanian (2015) and Fardouly et al. (2018) found that the relationship between comparison and women's eating disorder attitudes was stronger when comparing to celebrities than to peers, whereas Ho et al. (2016) found that comparison to peers had the stronger relationship.

Eight correlational studies focused on the influence of celebrity worship on body image and disordered eating attitudes. Celebrity worship was measured using versions of the Celebrity Attitude Scale (McCutcheon et al., 2002). The Celebrity Attitude Scale consists of three subscales of celebrity worship which progress from low intensity (entertainment-social), to moderate (intense-personal), to high (pathological).

Overall, the research found that celebrity worship was related to women and girls' body image concerns (Utami, 2019), eating disorder attitudes (Aruguete et al., 2014; Ho et al., 2016) and acceptance of cosmetic surgery (Jung and Hwang, 2016). The results for the entertainment-social celebrity worship subscale (the least intense and most normative form) were mixed. Swami et al., (2011) found that entertainment-social celebrity worship was related to poorer body image, whereas Narula and Varma (2018) found that girls with higher entertainment-social celebrity worship had more positive body image. The findings for the intense-personal celebrity worship subscale (the moderate form) consistently showed that the subscale was associated with body dissatisfaction (Maltby et al., 2005; Maltby and Day, 2011).

Two studies were unique in their methodology. First, Shorter et al. (2008) examined women's perceptions of celebrity's bodies and their own bodies. The researchers found that a larger discrepancy between a woman's own perceived body size and the perceived body size of her favorite celebrity was linked to disordered eating measures. Second, Lee and Lee (2019) examined perceived sociocultural pressure from celebrities on social media on men's body image concerns. The researchers found that perceived pressure from celebrities to have a

muscular and toned body predicted body dissatisfaction and disordered eating attitudes.

Big data research

The "big data" research (see Table 3) explored the effect of celebrities on body image by examining media reporting in magazines and newspapers, Twitter usage, and internet search patterns.

Research by Shepherd and Seale (2010) and Gow et al. (2012) examined how the media describes celebrities and eating disorders and body image. Shepherd and Seale (2010) analysed newspaper reporting of eating disorders and found that eating disorder stories were presented in four different styles: celebrity stories, genetic factors, complications of treatment, and recovery. Gow et al. (2012) examined magazine articles about celebrity pregnancy weight gain and found that celebrity weight gain was more likely to be portrayed as negative than positive or neutral.

Chrisler et al. (2013) analysed tweets sent immediately before and during the 2011 Victoria's Secret Fashion Show. Of the 977 tweets analysed, the researchers found that the main categories of tweets were about the viewers' personal experience watching the show (31.4%), advertising within the show (24.4%), celebrities and models attending or performing in the show (18.3%), and body image/eating disorders (13.7%). Importantly, 90% of tweets about body image included upward comparisons to the celebrities or models.

Research by Lewis et al. (2016) and Yom-Tov and Boyd (2014) examined the internet search patterns associated with information about celebrities with eating disorders. Lewis et al. (2016) first examined Lady Gaga's (a popular female singer) disclosure of her eating disorder. The researchers found that pro-eating disorder searches significantly increased after Lady Gaga discussed her eating disorder, although the same effect was not found for less popular celebrities. Yom-Tov and Boyd (2014) examined the relationship between internet searches for celebrities known to have an eating disorder and searches indicative of anorexic practices (e.g. #thinspo,

Table 3. Big data studies.

Author (year)	Ethnicity/country of study	Sample (N)	Procedure	Celebrity measure	Body image measure	Key findings
Chrisler et al. (2013)	USA	977 tweets	Analysis of tweets sent immediately before and during the 2011 Victoria's Secret fashion show	Coded tweets about celebrities	Coded tweets about eating disorders, body positivity, social comparison	18.3% of tweets about celebrities or models. 90% of tweets about body image suggested upward social comparisons to the models and celebrities
Gow et al. (2012)	USA	387 articles	Examined popular entertainment articles from 2007 to 2008 Exploring the portrayal of pregnant celebrities in the media	Search terms about celebrities being pregnant or giving birth	Search terms about weight gain and body dissatisfaction	13% of articles discussed weight and 30% shape. Pregnancy weight more likely to be negative, rather than positive, or neutral.
Lewis et al. (2016)	USA	N/A	Analysis of pro-eating disorder search patterns a month before and a month after Lady Gaga publicly disclosed her eating disorder	Focused on Lady Gaga (a popular singer celebrity)	Pro-eating disorder search terms	Pro-ED searches significantly increased after Lady Gaga discussed her eating disorder. Same effect not found for less popular celebrities (based on social media likes).
Shepherd and Seale (2010)	UK & USA	3583 news articles	Analysed UK and USA newspapers (between 1992 & 2008) for media reporting of eating disorders	Media reporting of celebrities	Eating disorder search terms	Media discussed eating disorders in 4 styles: celebrity stories, genetic factors, complications of treatment, & recovery. 58% of news articles about eating disorders mentioned celebrities
Yom-Tov and Boyd (2014)	Israel	9.2million searches	Analysed 3 data sets from Microsoft browsing information and Twitter	High perceived Anorexia score celebrities (291 celebrities who were searched for in association with anorexia)	Anorexia based search terms	Users had a significant increase in searching for general anorexic topics after searching for anorexia linked celebrities. Media coverage of anorexic celebrities triggers 33% increase of general anorexia searches but when mention of the celebrity's anorexia then general searches decrease (22% increase).

Table 4. Experimental studies.

Author (year)	Ethnicity/ country of study	Sample (N), % female	Source of sample	Age	Procedure	Celebrity measure	Body image measure	Key findings
Boersma and Jarry (2013)	Canada; Caucasian (64.1%), Middle Eastern (8.3%)	240 (100%)	University	18–53	Exposure to images of normal weight celebrities in a magazine style with derogatory wording about the celebrities gaining weight or neutral wording	Image exposure	BISS	Women in the derogatory condition had greater fear of negative appearance evaluation. Women with low body image investment: exposure to the derogatory condition resulted in lower body satisfaction and appearance self-esteem.
Brown and Tiggemann (2016)	Australia; Caucasian (77.4%)	138 (100%)	University	17–30	Exposure to 3 images types (celeb, peer, travel) and measured body image pre and post	Image Exposure (Instagram Celebs), CAS	VAS-BD, SAC	Exposure to celebrity images increased body dissatisfaction in comparison to travel images. No difference between peer and celebrity images for body dissatisfaction. Effect was mediated by state appearance comparison Celebrity worship moderated the effect of celebrity images.
Cohen and Blaszczynski (2015)	Australia; Caucasian (47.4%), Asian (35.8%)	193 (100%)	University	17–46	Viewed either Facebook (unknown peers' FB pages) or conventional (print media models and celebrities) thin ideal images and completed questionnaires pre and post exposure	Image Exposure	BASS, EAT-26	Exposure to either type of media: internalization, self-esteem, and appearance comparison significantly predicted change in BI. No significant differences between Facebook and conventional media in their effects on the relationship between appearance comparison and BI change.
Hopper and Aubrey (2016)	USA; Caucasian (78%), Black (10.2%)	127 (never pregnant) (100%)	University	18–24	Exposure to either full body celebrity images with captions praising their weight loss after pregnancy, headshots with captions, or control images	Image Exposure	TST, OBC	Full-body and headshot conditions resulted in higher state self-objectification compared to the control condition. Headshot condition: reported higher body surveillance scores than in the full-body condition.
Khaled et al. (2018)	Arab (90%)	1145 (100%)	University	17–40	2 (celebrity, model) x 3 (Thin, Heavy, Average) plus control, participants were exposed to images and then completed questionnaires	Image exposure Rating celebrity popularity and body shape	FRS	Viewing images of thin celebrities or models were not significantly more likely to desire thinner body size relative to those who viewed neutral images.
King et al. (2000)	Australia	96 (100%)	University	17–35	High or low body esteem conditions were exposed to 1 accurate and 6 distorted photos of five thin female celebrities (either edited bigger or smaller)	Exposure	BSQ	High in body shape concern: judged thin celebrities as thinner than actuality Unconcerned: judged accurately. Both: judged heavy celebrities as heavier than actuality.

(Continued)

Table 4. (Continued)

Author (year)	Ethnicity/ country of study	Sample (N), % female	Source of sample	Age	Procedure	Celebrity measure	Body image measure	Key findings
Meng et al. (2015)	USA; Caucasian (85%), African American (9.3%)	247 (100%)	University	Mean 20.34	4 different video interventions about Body Image (Factual information on Anorexia, Celebrity with Anorexia, Anorexia in the Media, Dove documentary with young girls discussing their body image concerns)	Video Exposure	Discrepancy: ideal and perceived importance	Celebrity video was rated as least effective and Anorexia in the Media was rated most effective. Body image discrepancy and internet use did not significantly predict campaign effectiveness
Slater et al. (2019)	UK; Caucasian (93%)	102 (100%)	Online recruiting	18–30	Exposure to either thin celebrity Instagram images or the thin celebrity images paired with parodies of those images	Image Exposure	VAS-BD, BAS, SATAQ	Paired parody images led to increased body satisfaction compared to the thin celebrity images alone.
Willinge et al. (2006)	Australia	188 (54%)	University	Mean 18.61	2 (gender) x2 (high or low body esteem) – Exposure to 1 accurate and 6 distorted/edited photos of five thin female celebrities (either edited bigger or smaller)	Image Exposure, Rated actual and ideal size of the celebrity	BES, EAT-26	Body-dissatisfied: judged actual size of thin female celebrities as thinner than actuality and chose ideal size that was thinner than celebrity's real size. Body-satisfied: accurate in judgments and chose ideals larger than celebrity's real size Women more satisfied with bodies after writing about a favorite thin celebrity than a control thin celebrity.
Young et al. (2012), Study 2	USA	79 (Study 2); (100%)	University	Mean 18.51	Participants wrote about their favorite female celebrity or a control celebrity and then filled out questionnaires	Rated perception of the female celebrity's body size	MBSRQ	More similar women felt to a celebrity, the more similar they felt to the celebrity's body and experienced greater satisfaction with their own bodies.
Young et al. (2012), Study 3	USA	44 (Study 3) (100%)	University	Mean 18.51	Participants wrote about their favorite female celebrity or a control celebrity and then filled out questionnaires	Experimental manipulation with celebrity, Degree of similarity (personality and body) between participant and celebrity	MBSRQ	

Note: Measure Abbreviations: BAS: The Body Appreciation Scale; BASS: Body Areas Satisfaction Scale; BES: Body Esteem Scale; BISS: Body Image State Scale; BSQ: Body Shape Questionnaire; CAS: Celebrity Attitude Scale; EAT: Eating Attitudes Test; FR5: Figure Rating Scale; MBSRQ: Multidimensional Body-Self Relations Questionnaire; OBC: Objectified Body Consciousness Scale; SAC: State Appearance Comparison; SATAQ: Sociocultural Attitudes Toward Appearance Questionnaire; TST: Twenty Statements Test; VAS-BD: Visual Analogue Scales for Body Dissatisfaction.

#pro-ana). The researchers found that individuals were significantly more likely to search for general anorexia-related topics after searching for anorexia-linked celebrities.

Experimental research

The main aim of the experimental studies was to explore the impact of celebrity image exposure on body image concerns. Overall, Table 4 shows that experimental research predominantly found that exposure to celebrity images had an impact on body dissatisfaction and disordered eating.

Two studies compared the differences between exposure to celebrity images and peer images on body image. Cohen and Blaszczynski (2015) found that exposure to magazine celebrity images or Facebook peer images increased body dissatisfaction. Likewise, Brown and Tiggemann (2016) found that exposure to celebrity or peer Instagram images increased body dissatisfaction. Both studies found no difference between the effect of peer and celebrity images on body dissatisfaction. Brown and Tiggemann (2016) also found that celebrity worship moderated the effect of celebrity images, such that women who were high on celebrity worship experienced relatively more body dissatisfaction in response to viewing celebrity images.

Several studies have exposed women to images of different sizes of celebrities and examined the effect on body image and on participant perception of weight. Both King et al. (2000) and Willinge et al. (2006) found that women high on body shape concern judged the celebrity image (which was edited to appear larger or smaller in weight) as thinner than actuality, while women unconcerned about body shape judge the celebrity's size accurately. In addition, Willinge et al. (2006) also determined that body-satisfied women chose an ideal body size (the ideal size for a female) that was larger than the celebrity's real size, while body dissatisfied women chose an ideal body size that was thinner than the celebrity's real size. Lastly, a study by Khaled et al. (2018) exposed Arab women to unedited images of thin (e.g. Taylor Swift), average (e.g. Jennifer Lopez), or heavy

(e.g. Adele) western celebrities, or a control condition (images of lightbulbs, buildings, and trees). Exposure to the thin celebrities had no effect on body dissatisfaction relative to the neutral images.

Two studies have explored whether adding commentary to celebrity images changes their effect on body image. Boersma and Jarry (2013) found that exposure to images of normal weight celebrities (e.g. Leona Lewis and Kimberly Walsh) in tabloid-style magazine articles with derogatory text about their weight had a negative impact on participants' body satisfaction and appearance self-esteem compared to the same images with neutral text. Hopper and Aubrey (2016) found that including commentary praising post-pregnancy weight loss underneath celebrity images from magazines resulted in higher state self-objectification and body surveillance than the control condition (home décor or travel destinations). Overall, the research found that including commentary focused on appearance and weight increases body image concerns.

Three experimental studies included celebrities in their interventions to improve body image concerns. Meng et al. (2015) examined a range of video interventions about disordered eating with the aim of reducing body image concern in women. The researchers compared four different videos: (1) general information about anorexia, (2) discussing a celebrity (Nicole Richie) suffering with anorexia, (3) information about how anorexia is presented in the media, and (4) a Dove documentary with young girls discussing their body image concerns. The presentation of anorexia in the media video was found to be the most effective intervention; the celebrity video did not influence body image. Slater et al. (2019) explored the impact of adding humorous parody images alongside thin celebrity images on Instagram to subvert the internalization of the thin ideal and reduce body dissatisfaction in women. The researchers found that the paired parody images led to lower levels of body dissatisfaction. Young et al. (2012) asked women to either write about their favorite female celebrity or an assigned female celebrity (the very thin Keira

Knightley). The researchers found that women were more satisfied with their bodies after writing about their favorite celebrity than the assigned celebrity.

Underlying theory

Most studies included in this review drew from social comparison theory. Exceptions were two studies that drew from objectification theory (Gow et al., 2012; Hopper and Aubrey, 2016) and seven studies that had no clearly stated underlying theory (Dowds, 2010; Jung and Hwang, 2016; King et al., 2000; Lewis et al., 2016; Maltby and Day, 2011; Shepherd and Seale, 2010; Utami, 2019).

All the qualitative research showed that both girls and women frequently reported that they compared their appearance to celebrities (see Table 1). The correlational research likewise confirmed that women and girls frequently used celebrities as an appearance comparison target (Chae, 2017; Fardouly et al., 2015) and that appearance comparison to celebrities was related to body image concerns and disordered eating (Fardouly and Vartanian, 2015; Fardouly et al., 2018; Ho et al., 2016; Jones, 2001).

Lastly, two experimental studies explicitly examined the role of appearance comparison. Brown and Tiggemann (2016) found that state appearance comparison mediated the effect of celebrity Instagram image exposure on body dissatisfaction. Similarly, Cohen and Blaszczynski (2015) found that state appearance comparison predicted an increase in body dissatisfaction after viewing celebrity magazine images. Overall, the research presented in this review suggested that women and girls frequently compared to celebrities and this process of comparison was harmful for body image.

Gender

Similar to most media and body image research, the studies in this review primarily included female samples. However, as men and adolescent boys also experience body dissatisfaction and disordered eating (McCabe and Ricciardelli,

2001; Striegel-Moore et al., 2009) and engage with celebrities (Aruguete et al., 2014), several studies in this review included male samples. One study by Lee and Lee (2019) included solely male participants and found that, similar to women, celebrities were associated with men's body image concerns.

Seven articles in this review included both male and female samples and specifically examined gender differences. Two of these found that boys also compared their appearance to celebrities (Dowds, 2010; Jones, 2001). The remaining four studies examined celebrity worship. They found that, as for women, there was an association between adult men's celebrity worship and body dissatisfaction and eating disorder attitudes (Aruguete et al., 2014; Ho et al., 2016; Maltby and Day, 2011). However, Maltby et al. (2005) found no correlation for adolescent boys.

Age

Most studies included adolescent or college age adult samples. Studies from both adolescent and adult samples appeared to find that celebrities were harmful for body image. However, only one study has compared findings across the lifespan. A correlational study by Maltby et al. (2005) examined celebrity worship and body dissatisfaction across three samples: adolescents aged 14–16 years, university students aged 18 to 30 years, and community adults aged 22 to 60 years. The researchers found that for girls between the ages of 14 and 16, intense-personal celebrity worship was associated with body dissatisfaction. However, this relationship was not evident for other groups.

Ethnicity

Research generally suggests that the influence of media on body image is similar across cultures (Grabe and Hyde, 2006). However, the research examined in this review suggests that the effect of celebrities on women's body image may be different for non-western women.

Three qualitative studies used non-white samples. African American women in the USA were found to be unlikely to conform their body image to the thin ideal standard promoted by white western celebrities (Webb et al., 2013). Similarly, Mexican-American women reported comparing their bodies to curvy Latina celebrities but not to thin white celebrities (Romo et al., 2016). In contrast, women in Lebanon reported comparing their appearance to western celebrities (El Jurdi and Smith, 2018).

Jung and Hwang (2016) conducted a correlational study with US and South Korean university students and found that US women had higher scores on celebrity worship than South Korean women. They also found that celebrity worship was significantly correlated with acceptance of cosmetic surgery for US women, but not for South Korean women. Khaled et al. (2018) conducted an experimental study exposing Arab women in Qatar to images of thin, average, or heavy western celebrities and found that no group were more likely to desire a thinner body size than women who viewed control images. This finding stands in contrast to previous research conducted with predominantly white samples in western countries which has found that exposure to thin ideal celebrity images has a negative effect on women's body image (Brown and Tiggemann, 2016; Cohen and Blaszczynski, 2015). Overall, the limited research on celebrities and body image across cultures suggests that non-white women might be less affected by thin celebrities than white women.

Recommendations for future research and conclusion

Despite the visibility of celebrities in both traditional and online media, research on the effect of celebrities on body image and eating disorders is still limited and piecemeal. The present article aimed to systematically review the available research. In sum, the results of 36 journal articles provide evidence across different methodologies that celebrities have a detrimental impact on body image and eating for women across the age range. **More specifically, the review identified**

exposure to celebrity images, comparison with celebrities, and worship of celebrities as particularly salient to body image.

As can be seen from Tables 1 to 4, the outcome measures used in these studies were many and varied, and ranged from measures of simple body image concern to clinical eating disorders. In addition, different outcomes were more suited to different methodologies. Qualitative studies focused their discussions with participants primarily around body image. The nature of this methodology allowed for participants to openly express their opinions and the findings showed that women and girls perceive that celebrities have a harmful impact on their body image. The correlational studies typically included standardized measures of body image and/or disordered eating attitudes and confirmed the qualitative findings with independent scales. The experimental studies focused on measures of state body dissatisfaction to determine causal direction, finding that acute exposure to images of thin celebrities led to poorer body image. Lastly, big data research focused primarily on clinical eating disorders and was able to demonstrate connections between celebrities in the media and eating disorders more globally.

As in all research, individual studies in this review need to be considered in the context of their risk of bias and their limitations. For the qualitative studies, sample sizes were small, participants were not blinded to the purpose of the study, and convenience samples were used (except for Castro and Osorio (2013) who used online recruiting). In addition, three of the qualitative studies (see Table 1) used group discussions to collect data, which may have led to some participants' opinions being overshadowed. For correlational studies, convenience samples were used except for three studies (Chae, 2017; Fardouly et al., 2018; Lee and Lee 2019) that used online recruiting. Unlike qualitative studies, the participants in correlational and experimental studies were not explicitly informed of the purpose of the research, although they may have been able to guess the purpose from the context. In comparison to the correlational and qualitative studies, the experimental

studies have the lowest level of bias as they utilized random allocation to experimental groups. However, except for Slater et al. (2019), all experimental studies used university samples. For the big data studies, the risk of bias is inherently low as large amounts of objective data are analysed with no human participants. In addition, all the big data studies employed multiple coders and reported high inter-rater reliability. Lastly, all the studies reviewed provided clear detail in their procedures and discussed methodological limitations appropriately.

Nevertheless, as a whole body of research, a few particular limitations that go across methodologies stand out. First, participant characteristics were not representative of the global community. Most studies involved high school or university aged women from western countries. To date, there have been no studies that have investigated the impact of celebrities on the body image and disordered eating concerns of older women (60+ years). Yet older women also experience body dissatisfaction (Clarke, 2002; Hetherington and Burnett, 1994) and are judged in relation to an ideal of female beauty that emphasizes both youthfulness and thinness (Tunaley et al., 1999). Second, the current research suggests that there are some ethnic differences. Non-western cultures seem to be less impacted by thin celebrities (Jung and Hwang, 2016; Khaled et al., 2018). However, celebrities within non-western cultures may still perpetuate a different ideal body type (e.g. curvy). Third, the research has primarily focused on women and girls. The limited research with men and boys suggests that they also compare themselves to celebrities and experience celebrity worship. Accordingly, future research should expand its sampling to examine the effect of celebrities on the body image and eating attitudes of older women, non-western women, and of men and boys.

Finally, the current review is not without its own limitations. As this field of research is growing, there are likely studies that have been published or are in the process of submission that have not been included in the review. Further, the review focused on studies that were published in English, which may have limited the cross-cultural conclusions possible. In addition, because

of the variety of measures employed in the studies, the review was not able to clearly distinguish between specific outcomes.

Despite the above limitations, the findings from the review have important practical and policy implications. First, the most obvious implication is that people should be advised to limit their exposure to celebrity media. However, given that celebrity culture is everywhere, this would present a daunting and unrealistic challenge. Second, potential restrictions on the presentation of celebrity images could be considered, for example, mandating disclaimers if images have been digitally or otherwise enhanced. These could be similar to Instagram's existing warnings prior to viewing images under the hashtags "skinny" and "thin" (Judkis, 2012). Third, celebrities might be encouraged to use their platforms and influence to actively promote a positive body image, shown to be protective against exposure to thin ideal media images (Andrew et al., 2015; Halliwell, 2013). Fourth, young people should be educated about the potential negative impact of exposure to celebrity media. In particular, media literacy programmes, which have shown some success in combatting negative body image (Levine and Murnen, 2009; Wilksch et al., 2015), need to include material on the potential dangers of heavily investing in and comparing with celebrities. Lastly, more extensive, wide-ranging, and creative research is required to assist policy makers towardS the most effective form of intervention.

In conclusion, the present review has offered an important distillation of the current state of knowledge about the effect of celebrities on body image and eating disorder attitudes. **In so doing, it has both contributed to and extended the growing body of literature on the detrimental effects of media on body image by highlighting the role played by celebrities. In particular, the review presents convincing evidence** that exposure to, worship of, and comparison with celebrities has maladaptive consequences for women and girls (and increasingly men and boys). Because celebrities have become such an integral feature of contemporary society, it is important that future research continue to clarify their influence on body image and disordered eating.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Zoe Brown  <https://orcid.org/0000-0002-4985-1004>

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