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General Cognitive Distortions and Body Satisfaction: Findings From The Netherlands and Curaçao

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The present study examined ten cognitive distortions, as assessed by the Cognitive Distortions Scale (CDS), and their relations to body satisfaction among young women living in The Netherlands ($n = 152$) and Curaçao (a former colony of the Netherlands; $n = 160$). Findings showed that, in general, Curaçaoan women reported higher body satisfaction than Dutch women, and that Dutch women scored higher on five out of ten cognitive distortions. Particularly among Dutch women, negative relationships were found between cognitive distortions and body satisfaction. In addition, mediational analyses suggest that cognitive distortions mediate the effect of culture on body satisfaction. Findings are discussed in light of cultural differences in ideal body shape and the supportiveness of women's social networks.

Keywords: body image, body satisfaction, cognitive distortions

Cognitive distortions refer to the different types of distorted cognitive processes that produce automatic negative thoughts, which in turn evoke or strengthen symptoms of psychological disorders, such as depression, anxiety, and addiction (e.g., Wilson, Bushnell, Rickwood, Caputi, & Thomas, 2011). Examples of the major types of cognitive distortions are mindreading (believing without evidence that others are negative about oneself) and catastrophizing (making excessively negative predictions about the future). These cognitive distortions in thinking may apply to all life domains. Individuals may, for instance, catastrophize events or behaviors in the domain of social relationships, their financial situation, and/or their appearance. In addition to these relatively general cognitive distortions that

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may apply to all life domains, domain-specific cognitive distortions can also be distinguished. With regard to body image, for instance, both Jakatdar, Cash, and Engle (2006) and Rudiger and Winstead (2013) found that appearance-related cognitive distortions, such as the tendency to negatively interpret others' positive comments about one's body, were negatively related to body satisfaction and positively to body image-related problems.

These latter findings fit well with the "cognitive content-specificity hypothesis" (Beck, 1976) that states that domain-specific cognitive distortions or irrational beliefs are more or less uniquely related to specific psychopathological problems, among which is eating disorder symptomatology (Jakatdar et al., 2006). In addition to these appearance-related cognitive distortions, it is, however, highly likely that general cognitive distortions in thinking also play a role in the development of body image problems and low body satisfaction. Previous research suggests that psychopathological problems may have their own "profile" in terms of general cognitive distortions (e.g., Leung & Poon, 2001). Examining the cognitive distortions that are related most strongly to low body satisfaction may therefore shed light on ways of thinking that may lower body satisfaction and that may increase the development of body image disturbances.

THE RELEVANCE OF COGNITIVE DISTORTIONS FOR PREVENTION

Identifying general cognitive distortions that are related to body dissatisfaction may help in developing programs for the prevention of body image-related problems for the general public and/or for individuals who suffer from low body satisfaction, but who have not (yet) developed symptoms of more severe psychopathology, such as eating disorders (e.g., Boone, Soenens, Vansteenkiste, & Braet, 2012). At this stage, individuals may not (yet) display strong appearance-related cognitive distortions, and, as a consequence, addressing these cognitive distortions may be of little use. As an alternative, prevention programs may focus more on the general cognitive distortions individuals may engage in and that are related to the dissatisfaction they feel with their body. Preventing individuals from developing an unhealthy or unhealthier way of thinking may help in preventing the development of (more severe) pathology, such as an eating disorder or body dysmorphic disorder (BDD). Another advantage is that by addressing more general cognitive distortions—rather than, for instance, appearance-related cognitive distortions—therapists may help individuals at risk to think in a more healthy way without emphasizing appearance-related cognitions that may trigger or feed an obsession for weight, appearance, or body shape. The aim of the present study is therefore to examine the relations between general cognitive distortions and body dissatisfaction in a nonclinical sample of young women. The present study restricted itself to young women because body image-related problems are especially an issue among that group (e.g., Liechty & Lee, 2013). Women more than men base

their self-worth on their physical appearance and, in addition, are confronted with more extreme and unattainable societal beauty standards than men.

To date, only a few attempts have been made to examine the relationships between general cognitive distortions and body dissatisfaction. Only one study (Möller & Bothma, 2001) investigated multiple general cognitive distortions (assessed by means of the Survey of Personal Beliefs [SPB]; Kassino, 1986) and their relationships to eating disorder symptomatology (but not body satisfaction). The scale these researchers used to examine cognitive distortions, the SPB, distinguishes five cognitive distortions: catastrophizing (overestimating the seriousness of an event), self-directed shoulds (inflexible self-demands), other-directed shoulds (inflexible demands of others), low frustration tolerance (underestimation of one's coping skills), and negative self-worth. In a nonclinical sample of 38 females with high body dissatisfaction, Möller and Bothma found positive relationships between eating disorder symptomatology and self-directed shoulds, other-directed shoulds, and negative self-worth.

Whereas Möller and Bothma (2001) studied the relationships between distorted thinking and eating disorder symptomatology, we are specifically interested in the relationships between general cognitive distortions and body satisfaction. This difference is important. Eating disorders may not be the only outcome of low body satisfaction: low body satisfaction may also lead to other problems, such as BDD or social anxiety. Finally, the SPB distinguishes only five cognitive distortions; the present study uses the Cognitive Distortions Scale (CDS; Covin, Dozois, Ogiewicz, & Seeds, 2011), which assesses ten cognitive distortions. The CDS is based on work by Burns (1980) and Beck, Rush, Shaw, and Emery (1979) on cognitive distortions that are characteristic of low mood and depression. The CDS assesses the following ten cognitive distortions (for an explanation of these cognitive distortions see the Method section): mindreading, catastrophizing, all-or-nothing thinking, emotional reasoning, labeling, mental filter, overgeneralization, personalization, should statements, and minimizing the positive. These cognitive distortions bias people's thinking in a negative way, setting them up for all kinds of emotional problems, of which low body satisfaction may be an example. As a result, these cognitive distortions play a relatively large role in cognitive theory of emotional disorders and are often referred to in clinical practice (e.g., Burns, 1980; Covin et al., 2011).

CULTURE AND GENERAL COGNITIVE DISTORTIONS

Cognitive distortions are, at least partially, the result of cultural influences (David & DiGiuseppe, 2010). That is, the way individuals are socialized by their parents, peers, and the media strongly shapes their way of thinking about themselves and the world, including possible cognitive distortions. As a result, it can be expected that individuals from different cultures will differ in the extent to which they are prone to certain cognitive distortions. For appearance-related cognitive distortions, evidence for this assumption was found by, for instance, Jakatdar et

al. (2006), who showed that White women were more likely to hold appearance-related cognitive distortions than Black women. For more general cognitive distortions, Steel, Möller, Cardenas, and Smith (2006) found that White South Africans score higher than Black South Africans on all of the five cognitive distortions measured by the SPB. Results such as these indicate that findings from one culture on cognitive distortions cannot be generalized automatically to other cultures. In order to fully understand the relationship between body satisfaction and general cognitive distortions, it is therefore important to conduct studies in different cultures and/or among people from different ethnic backgrounds. The present study thus examined the relationships between body satisfaction and general cognitive distortions among young women from two cultures: The Netherlands and Curaçao.

The Netherlands is a small and densely populated country in Western Europe. Its 17 million inhabitants predominantly have a Western European cultural background: only 10% of the population has a non-Western cultural background (Central Bureau of Statistics, 2013). Curaçao, on the other hand, is a small Caribbean island, with about 140,000 inhabitants. It is a former Dutch colony and still a constituent part of the Kingdom of the Netherlands. Curaçao is dependent on the Netherlands for matters like foreign policy and defense, although it is autonomous to a certain degree, with its own parliament. Although its inhabitants come from diverse ethnic backgrounds, the cultural background of Curaçao's inhabitants is overwhelmingly Afro-Caribbean.

It must be noted that individuals from different cultures may differ not only in the extent to which they hold cognitive distortions, but also in their level of body satisfaction. A meta-analysis by Roberts, Cash, Feingold, and Johnson (2006), for instance, showed that, in general, Black women are less vulnerable to developing body dissatisfaction than Caucasian women, probably because of Black women's more flexible conceptions of beauty and their lesser tendency to internalize the Western thin ideal (e.g., Overstreet, Quinn, & Agocha, 2010). Likewise, in comparing 26 countries on six continents, Swami et al. (2010) showed that, when controlling for age and body mass index (BMI), women in, for instance, North and South America experienced much more body dissatisfaction than women in Asia.

To sum up, the present study set out to investigate the following research questions:

1. To what extent do women from the Netherlands and Curaçao differ in their body satisfaction and the general cognitive distortions they hold?
2. What are the relations between general cognitive distortions and body satisfaction among young women from these two cultures?

What is unique about this study is that it examines both body satisfaction and general cognitive distortions as well as the relationships between these concepts in two cultures in very different regions of the world, an undertaking that has not been pursued before. The point of interest about these specific two regions is that

although both are part of the same kingdom, inhabitants of these regions differ greatly in their cultural background.

METHOD

PARTICIPANTS AND PROCEDURE

Participants were undergraduates recruited at the University of Groningen, in the north of the Netherlands, and at the University of Curaçao in Willemstad, the capital of the island of Curaçao. Recruits were asked to participate in a study on physical appearance and well-being. We aimed at two samples of young women because physical appearance plays an especially important role for young women. The Dutch sample completed an online questionnaire, whereas the participants from Curaçao were handed the questionnaires on paper by researchers from the University of Curaçao. These pencil-and-paper questionnaires were offered in both Dutch and Papiamentu, since both of these languages are spoken on Curaçao (with Papiamentu being the more dominant language; in the present study 72.2% of the Curaçaoan participants indicated that Papiamentu was their primary language). After completing the questionnaire the Curaçaoan participants received a granola bar as a sign of gratitude for their cooperation. In order not to influence their decision to participate they were not told about this in advance. Dutch participants received study credits for their participation upon completion of the questionnaire. They were aware of this at the time they voluntarily signed up for the study.

A total of 210 participants filled out the questionnaire in Curaçao, of which 38 were men (although the focus of the present study was on women, the researchers from Curaçao allowed volunteering men to also fill out a questionnaire). Male participants were removed from that sample, as was one participant of unknown sex (this was not indicated), leaving an initial sample of 171 Curaçaoan women, who all were Black. Because the focus of the present study is on *young* women, we also decided to remove participants over the age of 30. This meant removing an additional 9 participants from the Curaçaoan sample, leaving 162 Curaçaoan participants.

A total of 157 female participants (all under the age of 30) filled out the Dutch online questionnaire. Because the focus of the present study is on cognitive distortions, we decided to exclude all participants who had more than two missing values on the questionnaire assessing cognitive distortions (i.e., more than 10% missing data; see Instruments section). This was the case for 2 women from the Curaçaoan sample and 5 women from the Dutch sample, leaving final samples of 160 women from Curaçao and 152 women from the Netherlands. Mean ages were 21.4 years ($SD = 2.8$) for the Curaçaoan sample and 19.1 years ($SD = 1.8$) for the Dutch sample. Although the mean ages in these two groups differed significantly, $F(1, 311) = 77.12, p < .001, \eta^2 = .20$, this did not affect the results (for example, the absolute correlations between cognitive distortions and body

satisfaction with or without age correction differed on average 0.01; range 0.00 to 0.03). We therefore decided not to correct for the mean age difference between the two samples. We also asked the participants to report their current body weight (in kg) and body height (in cm) in order to calculate their BMI. The mean BMI was 25.9 ($SD = 6.6$) for the Curaçaoan sample and 21.6 ($SD = 2.8$) for the Dutch sample. This difference in BMI was significant, $F(1, 311) = 53.18$, $p < .001$, $\eta^2 = .15$. Because BMI is related to body satisfaction (in the present study, correlations between BMI and the two measures of body satisfaction described below were < -0.32 in both samples), we used BMI as a control variable in the subsequent analyses.

INSTRUMENTS

Body Satisfaction. The present study used two measures as an indication of body satisfaction (see also Dijkstra & Barelds, 2011). First, participants filled out the Body Areas Satisfaction Scale (BASS; Cash, 2000). This scale consists of nine items that reflect eight distinct body attributes as well as overall appearance. Example items are “weight,” “face,” and “upper body.” The participants were asked to rate how satisfied they were with each of these body attributes (1 = very dissatisfied; 5 = very satisfied). Cronbach’s alpha for this scale was .87 for the Curaçaoan sample and .81 for the Dutch sample. In addition, participants were asked the following question: “If you could grade the attractiveness of your body, how would you grade it?” Answering options ranged from 1 (very unattractive) to 10 (very attractive). This question was included in the first part of the questionnaire that assessed biographical information, before the other variables were assessed. Correlations between these two measures of body satisfaction were .67 for the Curaçaoan women and .76 for the Dutch women ($ps < .001$).

General Cognitive Distortions. The present study assessed the following 10 general cognitive distortions by means of the Cognitive Distortions Scale (CDS; Covin et al., 2011): mindreading (without evidence, believing that others are negative about oneself), catastrophizing (making excessively negative predictions about the future), all-or-nothing thinking (believing that something is either good or bad), emotional reasoning (believing something because it feels that way), labeling (labeling oneself as a certain kind of person), mental filter (focusing on negative information), overgeneralization (after a negative event, assuming that more bad things are going to happen), personalization (without evidence, believing one is responsible for negative events), should statements (believing that things should be in a certain way), and minimizing the positive (ignoring positive things about oneself). For each cognitive distortion, the CDS provides participants with a clear description of that cognitive distortion, as well as with two short cases that illustrate the description in both the social and achievement domains. Then participants are asked how often they engage in that cognitive distortion (for example, mindreading) in social situations and achievement situations.

Because our study was part of a larger study on body image and self-esteem, it was desirable to shorten this procedure. This was accomplished by providing participants with one rather than two examples to illustrate each cognitive distortion. For this purpose, the examples in the CDS, originally developed in Canada, were scrutinized for their applicability to the specific groups under study here in terms of gender and culture. For each cognitive distortion the example was chosen that, in the estimation of the researchers, participants from both the Dutch and Curaçaoan culture could probably relate to more. As a consequence, for six cognitive distortions the example that referred to a social situation was selected, and for four beliefs the example that referred to an achievement situation was chosen. In addition, the names of the individuals in the examples were replaced by names that are common in both Curaçao and the Netherlands.

For each cognitive distortion, participants read a short description and an example, after which they were asked to rate how often they engaged in this type of thinking in social situations and achievement situations respectively (see Covin et al., 2011, for details). Items were assessed on seven-point scales, ranging from “never” (1) to “all the time” (7). It is important to note that, in order to reduce potential defensive responding of the participants, words such as “biased” or “distortions” were avoided in this questionnaire (see Covin et al., 2011). The cognitive distortions were merely presented as “ways of thinking.”

Although the CDS was originally developed with the intention of measuring cognitive distortions in two contexts (interpersonal and achievement), factor-analytic results supported the use of a single cognitive distortion score (Covin et al., 2011). In the present study, we examined the structure of the CDS in the two samples separately. Principal components analyses with oblimin rotation clearly favored a single component structure in both samples (based on eigenvalues, scree test, and interpretation). Eigenvalues of the first component were 7.40 for Curaçao (37.02% of the variance) and 7.43 for the Netherlands (37.15% of the variance). We therefore decided to use a total cognitive distortion score by summing all 20 items. Cronbach’s alpha for this total score was .91 in both samples. In addition, we decided to use scores for each of the 10 cognitive distortions that are represented in the CDS. Examining the relationships between these 10 cognitive distortions and body satisfaction separately may shed light on the cognitive distortions that are most characteristic of low body satisfaction. It turned out that the interpersonal and achievement items within each cognitive distortion (i.e., two items per cognitive distortion) formed reasonably reliable sum scores. Cronbach’s alpha for the 10 scales ranged from .62 (mindreading) to .92 (minimizing the positive) for the Curaçaoan sample, and from .55 (catastrophizing) to .82 (mental filter) for the Dutch sample.

RESULTS

First, we calculated the mean cognitive distortions and body satisfaction scores for the two samples (see Table 1). Differences between the two samples were exam-

TABLE 1. Mean Cognitive Distortion and Body Satisfaction Scores for Curaçaoan and Dutch Women

	Curaçaoan women			Dutch women			<i>F</i> (1, 311)	η^2
	<i>M</i>	<i>SD</i>	<i>M</i> _{controlled}	<i>M</i>	<i>SD</i>	<i>M</i> _{controlled}		
Mindreading	5.56	1.56	5.57	5.65	1.27	5.66	0.24	0.00
Catastrophizing	4.26	1.92	4.27	4.68	1.47	4.68	3.61	0.01
All-or-nothing thinking	4.31	1.95	4.28	3.80	1.69	3.86	3.27	0.01
Emotional reasoning	4.92	1.71	4.89	5.03	1.36	5.09	1.11	0.00
Labeling	3.48	2.00	3.43	4.53	1.65	4.55	22.98*	0.07
Mental filter	3.73	2.02	3.70	4.59	1.79	4.61	14.13*	0.05
Overgeneralization	3.56	1.88	3.42	4.23	1.53	4.33	18.39*	0.06
Personalization	3.92	1.95	3.86	4.60	1.45	4.65	13.55*	0.05
Should statements	4.81	1.92	4.88	5.32	1.64	5.35	4.43	0.02
Minimizing the positive	3.48	2.09	3.47	4.32	1.82	4.32	11.42*	0.04
Cognitive distortions total	42.03	12.42	41.75	46.73	10.78	47.09	13.42*	0.04
BASS	35.23	6.03	35.76	31.51	4.89	30.74	57.77*	0.17
Self-rating of attractiveness	7.80	1.49	7.95	6.63	1.40	6.42	79.12*	0.22

Note. Controlled means are controlled for BMI. A Holm-Bonferroni correction was used to control for family-wise error. Higher scores on the cognitive distortion scales indicate more cognitive distortions, and higher scores on the BASS (Body Areas Satisfaction Scale) and self-ratings of attractiveness indicate higher body satisfaction. * $p < .05$ (Holm-Bonferroni correction).

ined in a MANOVA, using BMI as a control variable. The mean scores that were corrected for BMI (also listed in Table 1) were used for the comparisons between samples. In order to control for family-wise error, a Holm-Bonferroni correction (Holm, 1979) was used for testing the significance of the differences between the two samples. Several significant differences were found. The Curaçaoan women were, on average, more satisfied with their body (see Table 1). In addition, significant differences were found between the two samples with regard to labeling, mental filter, overgeneralization, personalization, minimizing the positive, and the total cognitive distortions score. Dutch women scored significantly higher on these scales, indicating that, generally speaking, the Dutch women in this study reported more cognitive distortions than the Curaçaoan women. The effect sizes for these significant differences are small to medium (0.04 to 0.07 for cognitive distortions and 0.17 and 0.22 for the body satisfaction measures; see Table 1).

Next, to examine the relations between body satisfaction and cognitive distortions, correlations were computed between the CDS scores and the two measures of body satisfaction. These correlations were computed for the two samples separately and were controlled for BMI (see Method section). The correlations are listed in Table 2. A Holm-Bonferroni (Holm, 1979) correction was again applied in order to control for family-wise error. Some significant negative correlations were found between cognitive distortions and body satisfaction, particularly in the Dutch sample. The more cognitive distortions the Dutch participants reported engaging in (total cognitive distortions score), the lower their BASS score ($r = -.310, p < .001$). In the Dutch sample, significant negative correlations were also found between the BASS and catastrophizing, labeling, mental filter, overgeneralization, and personalization ($r_s \leq -.250, p_s < .002$). Moreover, the self-rating of

TABLE 2. Correlations Between Cognitive Distortions and Body Satisfaction Among Curaçaoan and Dutch Women

	Curaçaoan women		Dutch women	
	BASS	Rating of attractiveness	BASS	Rating of attractiveness
Mindreading	-0.006	-0.101	-0.082	0.000
Catastrophizing	-0.217	-0.216	-0.250*	-0.177
All-or-nothing thinking	-0.163	-0.207	-0.075	-0.040
Emotional reasoning	-0.168	-0.113	-0.086	-0.030
Labeling	-0.235*	-0.099	-0.289*	-0.178
Mental filter	-0.072	-0.063	-0.364*	-0.267*
Overgeneralization	-0.179	-0.185	-0.367*	-0.357*
Personalization	-0.109	-0.118	-0.284*	-0.196
Should statements	-0.073	-0.078	-0.169	-0.090
Minimizing the positive	-0.222	-0.137	-0.135	-0.131
Cognitive distortions total	-0.231	-0.207	-0.310*	-0.220

Note. Correlations are controlled for BMI. A Holm-Bonferroni correction was used to control for family-wise error. BASS = Body Areas Satisfaction Scale. * $p < .05$ (Holm-Bonferroni correction).

attractiveness was significantly and negatively related to mental filter ($r = -.267$, $p = .001$) and overgeneralization ($r = -.357$, $p < .001$) in the Dutch sample. The correlation between the self-rating of attractiveness and the total cognitive distortions score was, however, not significant after applying the Holm-Bonferroni correction ($r = -.220$, $p = .007$). In the Curaçaoan sample, only one significant correlation was found, between labeling and the BASS ($r = -.235$, $p = .004$; see Table 2).

Because we found cultural differences with regard to both cognitive distortions and body satisfaction, we also tested a mediation model, in which the dependent variable was body satisfaction (BASS or self-ratings of attractiveness), the independent variable was culture (dummy coded 1 and 2), and the total cognitive distortions score was the mediator. BMI was used as a control variable. For the mediation analyses, the Process macro for SPSS (version 2.11; Hayes, 2014) was used (the default number of 1,000 bootstrap samples was used). A significant direct effect of culture was found for both the BASS ($t = -6.06$, $p < .001$) and the self-ratings of attractiveness ($t = -7.34$, $p < .001$). In addition, significant indirect effects were found for both the BASS ($ab = -0.10$, 95% CI $[-0.20, -0.04]$) and the self-ratings of attractiveness ($ab = -0.08$, 95% CI $[-0.18, -0.03]$). These results indicate that cognitive distortions indeed mediate the effect of culture on body satisfaction.

DISCUSSION

The general picture that emerges from the present study is that young women from Curaçao hold more positive images of their bodies than women from the Netherlands. Although relatively little is known about the body image of Afro-Ca-

ribbean women, they may, in this sense, resemble African American women. Both may be influenced relatively strongly by their African heritage in which, traditionally, being overweight is not seen as much of a problem as in, for instance, Dutch culture (Gray & Fredericks, 2012). According to Evans and McConnell (2003) African American women do not consider the Western mainstream beauty standards as relevant to themselves as Asian and Caucasian women do, and tend to be more flexible and fluid in their notions of beauty and attractiveness (Parker et al., 1995; see also Landrine, Klonoff, & Brown-Collins, 1992). As a consequence, according to Parker and colleagues (1995), the families and communities of African American women are often more accepting and supportive of women's appearance and also appreciate a fuller physique more than the families and communities of, for example, Caucasian women. This may also apply to women from Curaçao.

The present study also found that Dutch women reported more cognitive distortions than Curaçaoan women. More specifically, Dutch women reported higher scores on the cognitive distortions of labeling, mental filter, overgeneralization, personalization, and minimizing the positive, as well as the total cognitive distortions score. According to Vandervoort, Divers, and Madrid (1999) cultural differences in distorted thinking are related to cultural differences in trait anxiety (see also Fergus, 2014; Wong, 2008). This explanation suggests that Curaçaoan women suffer less from trait anxiety than women from the Netherlands. However, since the present study did not assess trait anxiety (nor did previous studies in this domain), we do not know to what extent this explanation is valid. Another possible explanation is that Curaçaoan women, more than Dutch women, successfully use one or more defense mechanisms, such as denial, devaluation, rationalization, or suppression (for an overview see Ehlers, Hettinger, & Paar, 1995). In order to retain a positive self-image, Curaçaoan women, for instance, may not acknowledge having cognitive distortions to the extent they do and report a relatively positive body image.

The present study also found general cognitive distortions, such as those assessed by the CDS, to mediate the differences in body satisfaction between women from the two cultures. Although of interest, it must be emphasized that this finding should be interpreted with caution, since the present study collected cross-sectional data only. To draw more solid conclusions about the mediating role of general cognitive distortions, longitudinal research is needed. Nonetheless, this finding adds to what we already know about body satisfaction, since previous studies on this issue have focused almost exclusively on specific appearance-related cognitive distortions (e.g., Jakatdar et al., 2006; Ridolfi, Myers, Crowther, & Ciesla, 2011). More specifically, this finding may generate new insights and ideas for developing prevention programs for the general public and/or for individuals who suffer from low body satisfaction but have not (yet) developed symptoms of more severe psychopathology, such as eating disorders (e.g., Boone et al., 2012). In order to prevent body dissatisfaction, intervention programs and therapists may focus on helping individuals to think in a (more) healthy way in general, rather than focusing on appearance-related cognitive distortions that may prime low mood and body satisfaction.

With regard to the specific relationships between body satisfaction and cognitive distortions, the present study found that cognitive distortions were related particularly to body satisfaction among Dutch women, showing the strongest negative relations for mental filter and overgeneralization. These findings imply that prevention programs aimed at Dutch women suffering from low body satisfaction may become more effective when including interventions aimed at these specific cognitive distortions. For instance, women may be helped to identify these cognitive distortions and learn to either challenge them and replace them with a different way of thinking (as in, for example, cognitive behavioral therapy) or to mindfully observe them in order to lower these distortions' effects on affect and behavior (as in, for example, acceptance and commitment therapy; Christea, Montgomery, Szamoskozi, & David, 2013). Likewise, prevention campaigns for the general public may be able to make people more aware of healthy and unhealthy ways of thinking by providing information about these cognitive distortions.

The finding that among Curaçaoan women hardly any significant relationships emerged between cognitive distortions and body satisfaction may, again, be attributed to the more flexible definition of beauty that African American women in general seem to hold. Another explanation is that women on Curaçao are less exposed to media messages of the thinness ideal than women in the Netherlands. In their study among 26 cultures, Swami et al. (2010), for instance, found that exposure to local media was not related to body dissatisfaction, whereas exposure to Western media was positively related to body dissatisfaction (see also, for example, Becker, 2004; Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). Much more than local media, Western media spreads the Western beauty ideal of thinness and, in so doing, may feed cognitive distortions (see also Richmond & Wilson, 2008), both appearance-specific ones, such as the belief that thinness is extremely important, as well as general ones, such as the idea that one should be perfect (Sheldon, 2010). The present study's findings do not imply that cognitive distortions are entirely unrelated to body satisfaction among Curaçaoan women. It is still possible that not general cognitive distortions, but more specific appearance-related cognitive distortions are related to body satisfaction among Curaçaoan women.

CONCLUSIONS

The present study is of interest to the literature for several reasons. First, it is the first to study general cognitive distortions among women from Curaçao, showing that women from this region show a different way of thinking than women from a Western culture, such as the Netherlands. The same applies to the concept of body image. The differences found between women from Curaçao and women from the Netherlands suggest that findings regarding cognitive distortions and body image cannot be generalized automatically from one culture to another. Uncovering these differences between cultures is important, since it helps to develop culturally specific interventions aimed at improving women's body image. More specifically,

our study suggests that interventions may need to take a relatively broad focus when it comes to cognitive distortions: interventions should not focus merely on specific appearance-related cognitive distortions, but also on all those general cognitive distortions that, in the context of body image, seem to matter.

It must be noted that there are several limitations to the present study. First, we did not assess women's socioeconomic status (SES). Research has shown that individuals with a lower SES are more likely to view heavier women as attractive than individuals with a higher SES. In a recent review of cultural studies on body size ideals, Swami (2015) concludes that the largest differences in body size ideals are found between sites differing in SES, with heavier figures being preferred in environments of low SES and thinness being valued in contexts of high SES. Although both the Netherlands and Curaçao are considered to be high-income countries by the World Bank (2014), the Netherlands is economically more prosperous than Curaçao. As a result, not only cultural differences, but also differences in SES may be responsible for the present study's results and may pose an explanation for why women in Curaçao report higher body image than Dutch women. As far as we know, however, in the literature on cognitive distortions, SES is not related to cognitive distortions. Second, in the questionnaire that was used the item about weight ("What is your weight in kilograms?") was included in the demographic questions that preceded the CDS. Thinking about their weight may have primed low mood in some of the participants, which may have affected their answers on the CDS. For future studies it therefore seems wise to put queries about weight at the end of the questionnaire. Third, the present study collected cross-sectional data only. As a consequence, our finding that general cognitive distortions mediate the differences in body satisfaction between women from the two cultures must be interpreted with caution. To draw more solid conclusions about the mediating role of general cognitive distortions longitudinal research is needed. Finally, the present study did not assess symptoms of general psychopathology. It is possible that women who were dissatisfied with their body also experienced symptoms of one or more clinical problems, such as depression or an eating disorder. Women suffering from such symptoms are more likely to experience general cognitive distortions as a result of these symptoms, not per se as the result of their body dissatisfaction. We can therefore not exclude the possibility that the negative relations between body satisfaction and general cognitive distortions found in the present study were the result of other psychopathological symptoms.

Future studies may further investigate the factors that, in Caribbean culture, help women preserve high body image and relatively low cognitive distortions. Knowledge on these factors may help pinpoint what it is exactly about Curaçaoan culture that protects women from developing a negative body image and cognitive distortions. This knowledge may be very useful in the development of interventions for women from other cultures (such as the Netherlands) who are more vulnerable to developing body dissatisfaction and a distorted way of thinking.

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