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Self and other dehumanization processes in health-related contexts: A critical review of the literature

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Abstract

Dehumanization is an everyday, pervasive phenomenon in health contexts. Given its detrimental consequences to health-care, much research has been dedicated to understanding and promoting the humanization of health services. However, health-care service research has neglected the socio-psychological processes involved in the dehumanization of self and others, in formal but also informal health-related contexts. Drawing upon socio-psychological models of dehumanization, this paper will bridge this gap by presenting a critical review of studies on everyday meaning-making and person perception processes of dehumanization in health-related contexts. A database search was conducted in PsycINFO, Web of Science, Scopus, and PubMed, using a combination of keywords on dehumanization and health/illness/body; 3,229 references were screened; 95 full-texts were assessed for eligibility; 59 studies were included. Most studies focused on informal contexts, reflecting a de-contextualized and one-sided view of dehumanization (i.e. not integrating actors' and victims' perspectives). Despite the dominant focus on self-dehumanization, emerging perspectives uncover the role of processes that deny human uniqueness to others, and their individual determinants and consequences for mental health. A few studies bring to light the functions of a variety of dehumanizing body metaphors on self and other dehumanization. These trends in the literature leave several gaps, which are here critically analysed to inform future research.

Key-words: Dehumanization; health; person perception; social representations; metaphors; body.

Introduction

A cardiologist starts interviewing a patient while typing, and neither looks at him, nor introduces herself. A woman with an infectious disease is ostracized by her peers because she is seen as “dirty and contaminated”. A man with a heart condition describes himself as a “failing machine”. These examples illustrate how formal or informal health-related contexts may involve experiences in which individuals are dehumanized (by others or themselves), by being perceived and/or treated as passive, homogeneous, reduced to their symptoms, objectified and/or isolated (Haslam & Stratemeyer, 2016; Haque & Waitz, 2012; Todres, Galvin, & Holloway, 2009).

Although such health-related dehumanization processes may occur both in everyday informal situations *and* in formal medical contexts where health-care is a central activity, this topic has gained much attention in the latter. In medical contexts, where it has been described as endemic and multidetermined (Haque & Waitz, 2012; Todres Galvin, & Holloway, 2009), dehumanization violates patients’ rights to autonomy and informed decision-making, and is seen as one of the key-drivers of inequitable health treatments and poorer clinical outcomes (Haque & Waitz, 2012).

Given such adverse consequences, in the last decade many researchers have dedicated their efforts to understanding and promoting the humanization of health services as a way to increase health-care equity and quality (Norton, 2003; Sueiras et al., 2017; Todres et al., 2009). However, despite all the vital contributions of the health-care service literature, it has often neglected the multidimensional social-psychological processes involved in the dehumanization of self and other in formal health-related contexts and beyond. This paper will bridge this gap by presenting a critical review of research on everyday meaning making and person perception processes of dehumanization in formal as well as informal health contexts.

Dehumanization processes in health: From health-care service to social-psychological approaches

Acknowledging the detrimental effects of dehumanization in health-care, the last couple of decades saw an exponential interest in investigating the main characteristics and determinants of

humanized health-care services (Barbosa et al., 2013; Nora & Junges, 2013). A reflection of such interest is the abundant literature on Patient Centered Care, concerned with providing care that is responsive to individuals' values, needs and preferences, by considering their personal and social circumstances and promoting their active involvement in health-care decisions (Berwick, 2009; IOM, 2001; Mead & Bower, 2000). A systematic review of 25 Patient Centered Care frameworks/models showed that the core elements of Patient Centered Care provision mainly target two aspects: *interpersonal processes* in the clinical encounter (e.g., effective communication and building partnerships with patients), and *technical processes* that involve tailoring effective health-care plans through the efficient use of resources (Constand, MacDermid, Bello-Has, & Law, 2014). The consequences of such interpersonal and technical processes on patient outcomes have also been investigated, and whereas some reviews revealed inconsistent results on patients' health outcomes (Dwanena et al., 2012; Lewin et al., 2001), others revealed generally positive effects (Rathert, Wyrwich, & Boren, 2012).

The above suggests that, despite the important contributions that Patient Centered Care research has made to the humanization of formal health-care services, there remains a need to better understand the complexities of (de)humanization processes in health-related contexts, for several reasons. First, the Patient Centered Care literature often ignores the psychosocial processes underlying meaning making and person perception that may influence interpersonal encounters and technical aspects in health-relations. For instance, it overlooks how health professionals can draw on shared belief-systems, or social representations (Moscovici, 1984), such as those supporting racism or classism, which devalue certain social groups, placing them at an increased risk of dehumanization (Haslam & Loughnan, 2014; Li, Leidner, & Castano, 2014; Lott, 2012). Second, by exclusively focusing on the role of formal clinical encounters, health service approaches leave unexplored everyday, informal dehumanizing interactions that may also bear a toll on individuals' health. Finally, it also ignores how dehumanization can be internalized and colour intrapersonal

processes (*e.g.*, cognitions, emotions; Bastian, Jetten, & Haslam, 2014; Haslam, Loughnan, & Holland, 2013), ultimately hindering people's health. All in all, a whole range of psychosocial processes and their interconnectivity have been left unexplored by health services research. It is our contention that social-psychological approaches to dehumanization in health may help bridge these gaps.

Social-psychological approaches to dehumanization in health-related contexts

In the last decades, social psychology has ceased to study dehumanization simply as an extreme phenomenon linked to overt intergroup conflict, also examining it as an everyday, pervasive and subtle person perception phenomenon (Haslam, 2006; Haslam et al., 2013; Leyens et al., 2001; Li et al., 2014). Current social-psychological models of dehumanization (Haslam, 2006; Haslam & Loughnan, 2014) suggest that we can dehumanize others and ourselves in two different ways. On the one hand, animalistic dehumanization involves the denial of traits that distinguish humans from other animals (uniquely-human traits, such as rationality, maturity, refinement, civility). On the other hand, mechanistic dehumanization involves the denial of traits that distinguish humans from objects/machines (human-nature traits such as emotionality, vitality, experiential depth).

Recent reviews show that social-psychological studies have been investigating the main victims, determinants and consequences of dehumanization in intergroup relations (Haslam & Loughnan, 2014; Haslam & Stratemeyer, 2016). Overall, these studies show that dehumanization may be determined by personal (*e.g.*, emotional, cognitive), interpersonal (*e.g.*, power asymmetries), and contextual aspects (*e.g.*, threat situations), bearing several (often negative) consequences to the victims of dehumanization (*e.g.* reduced feelings of empathy and decreased prosocial behaviors towards subordinate outgroup members). Recently the field has paid more attention to research on interpersonal relations (Bastian et al., 2014), showing that dehumanization

may be a two-way enacted process (*e.g.*, victims may also dehumanize perpetrators). This perspective has also shown how meta-perceptions of dehumanization, by being internalized (*i.e.* self-dehumanization), may influence individuals' own cognitive and affective processes in everyday interactions (Bastian et al., 2014). The pervasiveness of dehumanization in everyday interactions has also been highlighted by very recent studies focusing on the use of dehumanizing metaphors in daily communication processes (Haslam & Stratemeyer, 2016; Tipler & Ruscher, 2014). In a nutshell, social psychology has greatly contributed to uncovering the complexities of the meaning making and person perception processes of dehumanization in everyday life.

But, how have these processes been investigated in health-related contexts? Haslam and Stratemeyer's review (2016) has highlighted a few recent studies drawing upon the dual models of dehumanization that investigate the role of other-dehumanization in health-care settings and clinical encounters. Recent systematic reviews have also shown that self-objectification, *i.e.*, the internalized notion of being a sexual object – is a useful predictor of depression (Jones & Griffiths, 2015) and eating disorders (Schaefer & Thompson, 2018), especially among women. Although the conceptual relationship between objectification and dehumanization has raised some debate (see Gervais, Bernard, Klein & Allen, 2013), some authors argue that objectification may be considered a specific form of dehumanization (*e.g.*, Haslam, 2006; Haslam, Loughnan, & Holland, 2013). Following this line of thought, it is our understanding that self-objectification studies show how self-dehumanization processes stemming from reducing people to their sexualized body parts may also influence individuals' health. Moreover, given the centrality of the body in health and illness contexts, qualitative studies have also explored how certain body representations are anchored in dehumanizing metaphors beyond the sexual object (*e.g.*, body as a machine; a commodity), with different implications for health-related attitudes and behaviors (Camargo, Justo, & Jodelet, 2010; Lauri, 2009). The conceptual and empirical diversity of these studies suggests that it is time to take stock of this fast emerging literature. However, to the best of our knowledge, there is currently no

literature review of studies on meaning making and person perception processes of dehumanization in health-related contexts. As such, it is the general goal of the present article to offer a critical review of this field systematizing its main theoretical and empirical perspectives, identifying its main gaps and informing new avenues for future research.

Method

This review followed the general guidelines for critical literature reviews (Grant & Booth, 2009) and PRISMA statement recommendations for their reporting (Moher et al., 2009). The methodology comprised three phases: (1) identification of relevant studies; (2) study selection for inclusion, which included abstract screening and full text eligibility analysis; and (3) collating, summarizing and reporting the results (Figure 1).

1. Identifying relevant studies

An exhaustive two-step database search was performed to identify primary studies investigating dehumanization in health-related contexts. The search was conducted in PsycINFO, Web of Science, Scopus, and PubMed, using the following search terms: dehumanization/objectification/infrahumanization combined with health*/disease/illness/pain (Boolean terms “or”, “and” were used to this end). Second, the following search terms were used: body* and social representations/metaphor/analogy and health*/disease/illness/pain. These descriptors were searched in the title, key-words, and abstract. When possible, the searches were also made using MeSH terms (PsycINFO; PubMed).

These search terms were used to allow the identification of studies developed under different and not always intersecting theoretical approaches, namely, social psychology theories on dehumanization processes (Haslam, 2006; Leyens et al., 2002; Li et al., 2014) and theories on body representations/metaphors in health contexts (Camargo et al., 2010; Lauri, 2009). This would allow

a broader understanding of the meaning-making and person perception processes involved in the dehumanization of the self or others in these contexts. It should be noted that the term “depersonalization” was not included as a key-word for two reasons. First, as it is defined by social psychologists, it refers to a situational process of self-stereotyping where individuals see themselves as interchangeable members of a group, but not necessarily involving the denial of human qualities (Hogg, 2006). Second, as it is defined by clinical psychologists and in the burnout literature, it refers to a pathological experiential state involving changes in sensory, relational and affective systems (Leiter & Maslach, 2005; Radovic & Radovic, 2002), hence, not an everyday meaning-making and person perception process. The search was performed since database inception until February 16th 2018, and resulted in 3,229 records (Figure 1).

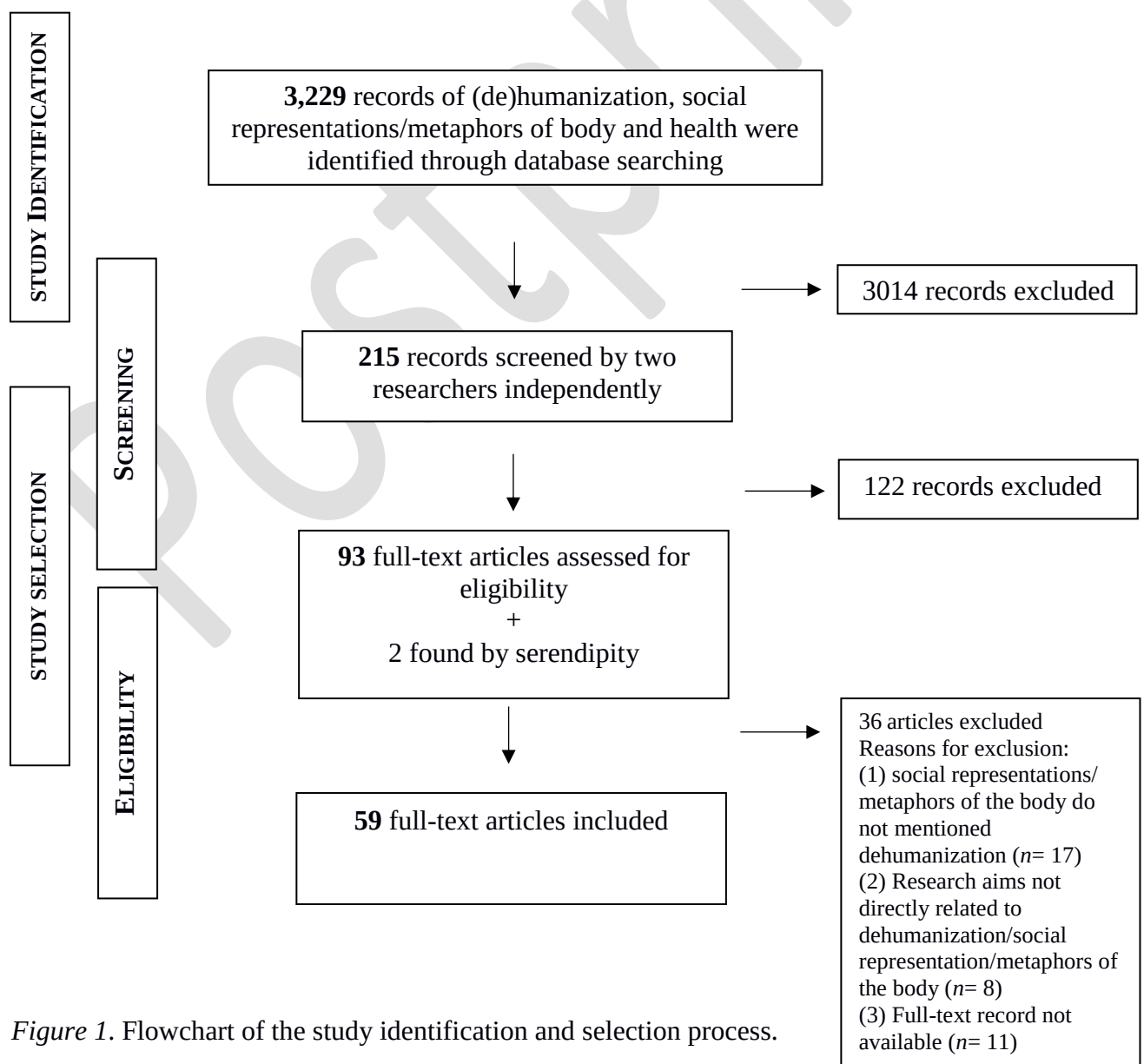


Figure 1. Flowchart of the study identification and selection process.

2. Selecting studies for inclusion

Selecting the studies for inclusion involved two stages: (1) abstract screening; and (2) eligibility analysis (Figure 1). For abstract screening, the following inclusion criteria were established *a priori*: (1) empirical articles with an available abstract; (2) articles related to dehumanization processes and/or dehumanizing social representations/metaphors of the body; and (3) articles published in Portuguese, English, French, or Spanish (languages mastered by the research team). Also, the following hierarchy of exclusion criteria was developed: (1) studies not involving human beings; (2) studies not related to health topics (according to WHO's health definition [2003]); (3) study aims not directly related to dehumanization processes or dehumanizing social representations/metaphors of the body; and (4) studies not related to meaning-making and/or person perception processes. The first phase of the screening was performed by the first author, and led to the exclusion of 3,014 abstracts (Figure 1). The remaining 215 abstracts were screened by the other two authors independently. Discrepancies were discussed and the final decision was reached by consensus. Ninety-nine records were excluded at this stage, leaving 93 records.

Then, to assess them (plus another two found by serendipity) for eligibility, texts were read in full (Figure 1). At this stage, 11 records were excluded because their full-text was not available, and 25 were excluded because their research aims were not directly related to dehumanization processes. Finally, a total of 59 articles were included (Figure 1).

3. Collating and summarizing the results

To collate and summarize the results, we developed a categorization system based on a content analysis procedure (Ryan & Bernard, 2000). The development of the category system drew upon Haslam and Stratemeyer's (2016) classification criteria, which was adapted to the current review's goals. The categories were developed in order to identify: who has been involved in dehumanization research; the main characteristics of the victims of dehumanization; the main theoretical frameworks that have been used; the main empirical approaches to identify the

determinants and consequences of dehumanization. Some of the categories (type of data sources, participants' role in dehumanization, type of dehumanization, empirical perspectives on dehumanization) were established *a priori*, in a top-down manner. Additionally, a bottom-up procedure was used to categorize the characteristics of the data sources and of the victims of dehumanization, health related topics, and theoretical backgrounds. The categorization system is presented in Tables 1, 2 and 3. The categories concerning participants and meanings/processes of dehumanization were not mutually exclusive. Table 1 depicts the *General Characteristics of the Data*, whereas Table 2 presents the *Characteristics of the Victims of Dehumanization*, and Table 3 shows the *Theoretical and Empirical Perspectives on Dehumanization*.

Eighteen randomly selected articles (30%) were independently coded by at least two co-authors. Inter-rater reliability was calculated, and a Cohen's Kappa of .90 was obtained, corresponding to an excellent rate of agreement (Robson, 1995). Disagreements were resolved by consensus. The remaining articles were coded by the first author.

Results

General characteristics of the data

Generally, studies used two types of data sources (1) *participants* (e.g., students, health professionals), by far the most representative type; and (2) *documents* (e.g., newspapers, magazines). Regarding participants, most studies involved students and lay people. Only 20% of the articles focused on health professionals or health users/patients (Table 1). The majority of the articles were conducted in Anglo-Saxon countries (71.3%).

Concerning the participants' role in dehumanization, most articles focused on participants as both actors and victims of dehumanization, with self-objectification studies being the most frequent (59.3%). The remaining studies focused, to a similar extent, on the role of participants as either actors or victims of dehumanization. Although dehumanization studies explored several health-

related topics, most of them focused on mental health (*e.g.*, depression, self-esteem; 40.7%) and health behaviors (*e.g.*, eating and exercise behaviors; 25.4%). Two studies focused on chronic illness issues (Table 1).

Table 1.

Characteristics of the data: Type, country of origin, role regarding dehumanization and health topics

	<i>n</i>	<i>%</i>	<i>Article ID#²</i>
<i>Type of data sources¹</i>			
<i>Participants¹</i>			
Health professionals	8	13.6	15, 25-26, 35, 41, 43, 51, 54
Patients/health-care users	4	6.8	9, 15, 35, 46
Students	34	57.6	1, 2, 3-5, 7-8, 10-11, 13, 14, 17-23, 27-28, 30-34, 36-37, 39-40, 42, 52-53, 58-59
Employees	3	5.1	7, 49-50
General population	11	18.6	18, 24, 28-29, 31, 44-45, 47-48, 55-56
<i>Documents</i>			
Magazines/blog/TV shows	4	6.8	6, 12, 38, 57
<i>Country of origin</i>			
Australia	6	10.2	1, 4, 5, 10, 18, 52
Italy	6	10.2	14, 24, 41-42, 51, 54
United Kingdom	8	13.6	8, 9, 12, 15, 26, 39, 43, 56
United States	28	47.5	3, 6, 11, 13, 17, 19-23, 25, 27-33, 36-37, 40, 44, 49-50, 53, 55, 57-58
Other Countries	11	18.6	2, 7, 16, 34-35, 38, 45-48, 59
<i>Role on (de)humanization</i>			
Actor	11	18.6	16, 24-26, 28, 33, 41-43, 51, 54
Victim	13	22	1, 3, 6-7, 9, 12, 34, 38, 45, 46, 56-57, 59
Actor and Victim	35	59.3	2, 4-5, 8, 10-11, 13, 14-15, 17, 18-23, 27, 29-32, 35-37, 39-40, 44, 47-53, 55, 58
<i>Health topics investigated</i>			
Mental health	24	40.7	1, 3-5, 13-14, 18, 22, 25, 27-28, 30-33, 37, 39, 41, 45, 51-54, 59
Health behaviors	15	25.4	6, 8, 10-12, 16, 19-20, 24, 29, 34, 36, 40, 44, 57
Reproductive health	8	13.6	2, 15, 17, 23, 35, 42, 47-48
Sexual health	4	6.8	21, 55-56, 58
Health-care services/assistance	3	5.1	26, 38, 43
Occupational health	3	5.1	7, 49-50
Chronic illness	2	3.4	9, 46

¹ Categories not mutually exclusive. ² 'Articles' references are presented in the final reference list.

Characteristics of the victims of dehumanization

The victims of dehumanization were mainly adults, particularly younger adults (72.9%; Table 2). Only one study focused on older people. Even though most studies involved multi-ethnic samples, they often presented a majority of white people. Females have been the main subjects of research, particularly in self-objectification studies. Indeed, only two studies investigated men as victims of dehumanization. Finally, victims' socioeconomic status (SES) was often left unmentioned and most papers specifying it presented mixed samples (Table 2).

Table 2.

Characteristics of the Targets of Dehumanization: Age, Skin Color, Sex, and SES

	<i>n</i>	%	Article reference
<i>Age group¹</i>			
Adolescents (age between 10-19)	7	11.7	4-5, 21, 34, 39, 52-53
Adults (age between 18-60)	43	72.9	1, 3, 7-11, 13-14, 16-19, 23-29, 30, 31-33, 35-37, 40-45, 47-48, 50-51, 54-59
Older people (over 60)	1	1.7	38
Mixed samples ²	6	10.2	2, 15, 20, 22, 46, 49
Not mentioned	2	3.4	6, 12
<i>Sex</i>			
Female	33	55.9	2, 4-6, 8, 10-11, 15, 17, 20-23, 27, 29, 30-33, 35-37, 39-40, 42, 47-48, 52-55, 57-58
Male	2	3.4	14, 18
Both	20	33.9	1, 3, 7, 9, 13, 19, 25, 26, 28, 34, 38, 41, 44-46, 49-51, 56, 59
Not mentioned	4	6.8	12, 16, 24, 43
<i>Race/ethnic background</i>			
Mixed-samples	36	61	2-5, 8, 10-11, 13-15, 17, 19-22, 25, 27-29, 30-33, 36-37, 40, 44-46, 49-53, 55, 57-58
Not mentioned	23	38.9	1, 6-7, 9, 12, 16, 18, 23-24, 26, 34-35, 38-39, 41-43, 47-48, 51, 54, 56, 59
<i>SES</i>			
Mixed SES	16	27.1	4, 9, 14-15, 17, 21-22, 27-28, 31, 42, 44, 49, 52-53, 55
Not mentioned	43	72.9	1-3, 5-8, 10-13, 16, 18-20, 23-26, 29, 30, 32-41, 43, 45-48, 50-51, 54, 56-59

¹Age groups defined according to WHO criteria; ²Mixed samples comprised adolescents-adults or adults-older adults.

Theoretical and empirical perspectives on dehumanization

Almost 60% of the studies drew upon *Self-objectification Theory* (Fredrickson & Roberts, 1997), mainly to investigate associations between self-objectification and health-related outcomes (Table 3). Around 18% of the studies drew upon psychosocial dehumanization theories, particularly the *Dual Model of Dehumanization* (Haslam, 2006; Articles' ID#1, 7, 28, 33, 42, 45, 59), or the *Infracumanization Theory* (Leyens, 2009; ID#41, 51, 54), to analyze determinants and consequences of other-dehumanization. Discursive approaches were used to explore dehumanized representations or metaphors of the body in the press (ID#12, 38, 43), or in participants' discourses (ID#3, 15-16, 24, 46, 56). Two studies used *Social Representations Theory* (Moscovici, 1984) to explore attitudes towards organ donation (ID#24) and health professionals' dehumanizing representations about people who are transgender (ID#26; Table 3).

Regarding the type of dehumanization, 64.4% of the retrieved articles examined self-dehumanization, mostly self-objectification, rather than other-dehumanization (Table 3). In what concerns empirical perspectives on dehumanization, articles fell into two main categories (Table 3): (1) studies qualitatively exploring the *meanings* underlying dehumanizing social representations/metaphors of the body ($n=15$); and (2) studies investigating *processes*, *i.e.* determinants and consequences of other and self-dehumanization ($n=54$) in health-related contexts. Next, we sequentially summarize their findings.

Table 3.

Theoretical and Empirical Perspectives on Dehumanization

	<i>n</i>	%	Article reference
<i>Theoretical Background</i>			
Self-objectification	36	61	2, 4-6, 8, 10-11, 13-14, 17-23, 27, 29, 30-32, 34, 36-37, 39-40, 44, 47-50, 52-53, 55, 57-58
Dehumanization theories	11	18.6	1, 7, 25, 28, 33, 41-42, 45, 51, 54, 59
Discursive Psychology	8	13.6	3, 12, 15, 16, 38, 43, 46, 56
Social Representations	2	3.4	24, 26
Not specified	2	3.4	9, 35
<i>Type of dehumanization</i>			
Other-dehumanization	18	30.5	1, 6-7, 12, 16, 25-26, 28, 33, 38, 41-43, 49, 51, 54, 57, 59
Self-dehumanization	38	64.4	2-5, 8-11, 13-14, 17-24, 27, 29-32, 34, 36-37, 39-40, 44, 46-48, 50, 52-53, 55-56, 58
Both	3	5.1	15, 35, 45
<i>Meanings of dehumanization¹</i>			
Dehumanizing metaphors of the body	15	25.4	3, 6, 9, 12, 15-16, 24, 26, 34-35, 38, 43, 46, 56-57
<i>Processes of dehumanization¹</i>			
Correlate/Predictor	32	54.2	1, 3, 4, 7-9, 11, 14, 17-18, 21-24, 27-30, 32, 34, 36-37, 44-45, 48, 50-56, 58-59
Mediator	6	10.2	5, 7, 19-20, 31, 49
Moderator	3	5.1	11, 27, 36
Outcome	13	22	2, 7, 10, 13, 25, 33, 39, 40-42, 47, 49, 52

¹Categories not mutually exclusive.

Meanings of dehumanization in health-related contexts

These papers mainly examined dehumanizing body representations/metaphors. They were organized along two main themes: (1) *Dehumanized metaphors of one's own body* (n=7); and (2) *Dehumanized metaphors of others' bodies* (n=8).

Dehumanized metaphors of one's own body

These studies mainly identified objectification metaphors used by individuals to describe their own bodies. Individuals with chronic illnesses (e.g. hypertension) equated their own bodies to failing machines (e.g. "car with only three wheels"; "time bomb"; ID#46), whereas pregnant and breastfeeding women depicted their bodies as "suspicious machines", mistrusting their efficacy in achieving expected outcomes (e.g. able to: deliver a healthy baby; ID#35; breastfeeding; ID#15). The same metaphor of the "body as machine" was also used by healthy people to describe body functioning (ID#24, 56). Female adolescents presented their bodies as "sexual objects" constantly submitted to social evaluation, by the pressure to maintain an aesthetic appearance (ID#34). Such objectifying metaphors seem to disengage people from their own experiences and emotions. These metaphors, however, highlighted distinct self-perceptions. For instance, the "car with only three wheels" emphasized a limited performance, whereas the "sexual object" emphasized performative and appealing behaviors at the expense of individuals' ability to think rationally.

Some studies also showed that people with infectious diseases (e.g. HIV) used other dehumanizing metaphors (e.g. "contaminated", "dirty") to present their own bodies and to explain the sense of being separated from others and their feelings of social isolation (ID#9). This is dehumanizing because individuals reduced themselves to stigmatizing characteristics of the disease, overshadowing their human essence (e.g., warmth, experiential depth). Overweight people reported having "a second class body" (ID#3, 34), also indicating feelings of social isolation. Furthermore, they recognized meta-perceptions associating overweight people with a lack of agency and control over life, reflected in the use of metaphors conveying passivity (e.g. "couch potatoes"; ID#3). These

metaphors all seem to promote social disconnection, but whereas the “contaminated” body metaphor emphasized the risk of spreading diseases and the need to be apart from others, the “second class body” underlined a lower position in a hierarchy of body-related value, and the “couch potato” stressed a lack of agency.

Dehumanized metaphors of others' bodies

This set of studies ($n=9$) again shows that objectification metaphors were the most commonly used by health professionals and the press to present others' bodies. Pregnant and breastfeeding women's bodies were represented by health professionals by objectification metaphors as “faulty machines” that needed constant supervision to decrease and prevent risks (ID#15, 35). The metaphor of the body as a machine was also used by medical students to communicate about body functioning (ID#16). However, it was used differently in newspapers when discussing the use of sleeping drugs: here the body as a “failing machine” highlighted the importance of sleeping medicines to recover normal body functioning, whereas the body as a “competitive machine” was used to argue against the use of those medicines (ID#12). Transsexual people were objectified by health professionals according with their surgery status, being reduced to their “operative” or “pre-operative” bodies (ID#26). Again, the female body was mainly represented as a “sexual object” by health magazines, which valued white, young, “thin and lean” (ID#6, 57). This set of metaphors, although all objectifying, again appeal to distinct perceptions of others. For instance, the “faulty machine” emphasizes problems in producing effective responses and the need for assistance, whereas the “sexual object” stresses passivity and utilitarian value.

Studies also showed how the metaphor of the “victim” was used by health-care professionals to describe end-of-life patients (#43) and older people (ID#38), but with different implications. Again, the same metaphor was used to endorse distinct representations: end-of-life patients were presented as victims of illness who lacked the ability to fight back, but still held emotions and

beliefs; older people were mainly represented as victims of age, with diminished desires, capacity of decision-making and behavioral intentionality.

Psychological processes of dehumanization in health-related contexts

This set of articles investigated the psychological processes involved in other-dehumanization ($n=12$) and self-dehumanization ($n=37$), namely their predictors, mediators, moderators, and outcomes.

Other-dehumanization processes in health-related contexts

Articles examining these processes drew mainly on the *Dual Model of Dehumanization* (Haslam, 2006) or the *Infracommunion Theory* (Leyens et al., 2001). All these studies used cross-sectional designs. A set of six studies investigated what determines other-dehumanization in health-related contexts. Another set investigated the health-related consequences of other-dehumanization and some of its mediating processes and moderating conditions.

What determines other-dehumanization?

Three studies focused on the predictive role of individual characteristics of the actor (ID#33, 41-42), three on individual characteristics of the victim (ID#25, 45) and one on situational characteristics (ID#7).

The first set investigated actors' skills, beliefs and biological characteristics as determinants of other-dehumanization. Students' lower perspective-taking skills and empathic concern, predicted a lower recognition of uniquely human traits (*e.g.* cognitive ability) in patients with dementia (ID#33). Psychiatrists/psychologists who believed that mental illness had a genetic aetiology (rather than psycho-environmental) perceived the patient as experiencing less (uniquely human) secondary emotions (*e.g.*, comfort, disappointment; ID#41). In a semantic priming task, women during

ovulation denied other women (but not men) uniquely human traits more than when they completed the task during other menstrual cycle phases (ID#42).

Studies focusing on victims' characteristics revealed that presenting victims as holding cognitions decreased their likelihood of being dehumanized. Health professionals dehumanized fewer patients with mental illness when they were presented with more uniquely human characteristics (*e.g.* ability to plan and to make choices; ID#25). Conversely, when patients were presented with mental illness they were more dehumanized (mechanistically), especially if they belonged to a lower SES (ID#45).

One study, focusing on situational determinants, showed how employees' higher perceived organizational support decreased their perceptions of being dehumanized by their working environment (organizational dehumanization), which in turn protected their mental health (ID#7). In sum, most of these studies looked for intra-individual determinants of other-dehumanization from the actors' perspective, showing that the attribution of core attributes of humanness to others (*e.g.*, patients) may be determined by victims' characteristics (*e.g.*, bearing illness that may affect their cognitive or affective agency) but also and importantly by actors' beliefs and skills.

What are the consequences of other-dehumanization?

Six studies investigated the consequences of other-dehumanization. Most focused on mental health outcomes (ID#28, 49, 51, 54, 59) and only one on physical health (ID#1). These studies examined the consequences on both actors' (ID#28, 51, 54) and victims' health (ID#1, 49, 59), and some also evaluated personal and contextual moderators of these associations (ID#1, 51, 54, 59).

The first set investigated the protective effects of patient dehumanization on health-care professionals' mental health (ID#51, 54). The denial of patients' humanness (*e.g.* uniquely human attributes like secondary emotions) was related to health-care professionals' lower levels of distress (ID#51) and burnout (ID#54). These associations were moderated by individual and contextual

characteristics. More specifically, they were only significant for nurses reporting high affective commitment to the organization and to patients (ID#51) or health professionals with higher direct contact with patients (ID#54). Conversely, among lay people, the attribution of uniquely human characteristics to individuals with mental illness played a self-protective role by increasing their own willingness to seek psychological treatment (ID#28).

Another set of studies investigated the consequences of other-dehumanization for victims' health. Patients whose doctor had a dehumanizing approach by focusing on the body as a machine, ignoring patients' thoughts and feelings, expressed less adherence to recommended treatments, particularly for psychological therapies (vs. physical; ID#1). Interestingly, this was only true for female patients, as males were more compliant with dehumanizing doctors, perceiving them as more competent (ID#1). Also, women who perceived their work environment as dehumanizing, namely through sexual objectification, reported more anxiety, rumination and eating disorders (ID#49). Finally, an experimental study with undergraduate students revealed that people with high self-esteem (vs. those with low self-esteem) expressed higher levels of sadness and aggression when they were mechanistically dehumanized, but not when they were animalistically dehumanized (ID#59). In sum, this set of studies showed that patients' dehumanization seems to be protective of professionals' mental health, decreasing stress and burnout, whereas being a victim of dehumanization leads patients to poorer medical adherence and mental health.

Self-dehumanization processes in health-related contexts

The majority of articles investigated self-dehumanization processes (64.4%), mainly focusing on self-objectification (61%). Most of these papers used cross-sectional designs and female samples. Some investigated determinants of self-dehumanization ($n=9$), but most analyzed

self-dehumanization as a predictor of health-related outcomes, its mediating processes and moderating conditions ($n=31$).

What determines self-dehumanization?

Most studies on the determinants of self-dehumanization examined situational influences on self-objectification. Two articles showed that adolescents/young adults (mostly female) enrolled in yoga (ID#13) and mindfulness classes (ID#39) reported a decrease in self-objectification after eight weeks. These participants also valued health behaviors more as a means to protect their physical health rather than to improve their appearance. An experimental study showed that young women who attended an exercise class where the instructor emphasized the role of exercise to improve appearance showed higher levels of self-objectification than young women who attended classes where the health-protective role of exercise was emphasized; this was particularly true for women who reported higher motivations for doing exercise for aesthetic reasons (ID#40). Women working in sexually objectifying environments (*e.g.* restaurants) reported higher self-objectification, ultimately accounting for higher depression and lower job satisfaction (ID#50). Young people who more frequently used Facebook also reported higher levels of self-objectification (ID#10, 19), which accounted for their poorer self-esteem and mental health (ID#19).

Besides situational influences, three studies also investigated the role of individuals' characteristics (health-related behaviors and beliefs) as determinants of self-objectification. Individuals who smoked (ID#20) reported frequent self-weighing behaviors (ID#31) or body image concerns (ID#5) and also showed higher self-objectification, which accounted for eating behavior disorders.

In sum, most studies focused on situational (vs. individual) determinants of self-objectification, with some (ID#5, 19-20, 31, 50) also showing that it ultimately accounts for the

detrimental effects of situational conditions on individuals' mental health and eating behaviors. This brings us to the studies specifically focusing on the consequences of self-dehumanization.

What are the consequences of self-dehumanization?

Most studies (45.8%) investigated the role of self-objectification as a correlate/predictor of health-related outcomes. These studies typically used female samples and cross-sectional designs. Among these studies, some explored mediating effects ($n=9$) and a few examined the conditions that modulated the associations between self-objectification and health outcomes ($n=2$). A set of five studies examined how dehumanizing body metaphors influenced individuals' health behaviors.

Most articles examined the cross-sectional association between self-objectification and mental health outcomes. Self-objectification was associated with more anxiety and depressive symptoms (ID#22, 27, 32, 37, 44, 52), lower self-esteem (ID#22, 30, 53), social activities restriction (ID#48), lower well-being (#39) and more self-harm behaviors (ID#37). Moreover, self-objectification was related to increased negative body evaluation (ID#18, 31-32, 37, 52), which accounted for its detrimental effects on mental health (ID#52). Only three studies investigated the mental health consequences of other types of self-dehumanization. An experimental study showed that lay peoples' mechanistic self-dehumanization was related to increased negative affect and anxiety (ID#45). Dehumanizing representations of one's own body (*e.g.* "second-class", "couch potatoes") bear detrimental effects on body satisfaction and well-being in men and women (ID#3). Also, perceiving the body as "contaminated/dirty" was related to worse mental health among people with HIV (ID#9).

Self-objectification effects on eating behaviors also emerged as a frequent topic of research. Two longitudinal studies showed that self-objectification predicted an increase in female adolescents' and male young adults' disordered eating behaviors one year (ID#4) and four years later (ID#14). Also, male body builders who reported higher levels of self-objectification also

showed more eating behavior disorders (ID#18). Some studies showed that the relation between self-objectification and eating behaviors was mediated by body image concerns (ID#8, 52). Furthermore, two other studies explored spiritual conditions that modulated the association between self-objectification and disordered eating behavior (ID#11, 27), revealing that this association was buffered by higher levels of self-compassion (ID#27) but not spirituality/religiousness (ID#11).

Self-objectification was related to maladaptive health behaviors. For instance, female adolescents who described their bodies as “sexual objects” avoided practicing physical exercise in public spaces due to the prospect of being under the “male gaze” (ID#34). Moreover, women with higher self-objectification engaged more in extreme levels of exercise (ID#29) and in avoiding leisure and social activities (ID#48). Even among pregnant women, higher self-objectification was related to increased engagement in unhealthy behaviors during pregnancy (*e.g.*, extreme dieting, exercise practices; ID#44). Also, one article examined the role of self-objectification on health behavior intentions (*e.g.* breast self-exam; ID#36); high self-objectification was associated with more intentions of breast self-examination when a mortality scenario (*e.g.* breast cancer) involved an objectified woman (*i.e.* appearance highlighted). Only two studies investigated the health-related consequences of other types of self-dehumanization on health behaviors; when the body was represented through its mechanical functioning, people were more favorable to using hormonal contraception (ID#56) and to organ donation (ID#24).

Self-objectification negatively influenced sexual and reproductive health. Women who reported higher self-objectification revealed poorer preventive sexual behaviors, such as lower attendance of medical appointments and lower use of contraceptive methods (ID#21, 58), as well as worse sexual satisfaction and well-being (ID# 55). Moreover, some mediators, such as sexual self-efficacy (ID#21), depression and appearance anxiety (ID#55), body appreciation and relationship quality (ID#58) accounted for the association between self-objectification and sexual health. Additionally, self-objectification was associated with more negative attitudes towards menstruation

and breastfeeding (ID#2, 23, 47). Attitudes towards menstruation, in turn, mediated the relation between self-objectification and participants' reactions to the use of the menstrual cup (ID#17).

Overall, studies investigating the consequences of self-dehumanization on health outcomes have almost exclusively focused on self-objectification. This particular form of self-dehumanization has been associated with poorer mental health, unhealthy eating behaviors, poorer health behaviors, and poorer sexual/reproductive health and well-being. Only a small and emerging set of studies has investigated the consequences of other forms of self-dehumanization for individuals' mental health and health behaviors, typically relying on dehumanizing body metaphors.

Discussion

The purpose of this review has been to provide a critical overview of the current research on psychosocial meanings and processes of dehumanization in health-related contexts. A critical analysis of its main theoretical and empirical perspectives now follows, providing insights about its main gaps and pointing to avenues for future research.

General characteristics of the field: informal health contexts, and a decontextualized and one-sided view of dehumanization

Studies' general characteristics reflected three main trends. First, most relied on students/lay people for studying dehumanization, especially examining its impact on their psychological health, eating and exercise behaviors in informal health contexts. Indeed, only 20% of the studies were conducted with health-care professionals and/or patients, with studies on chronic illnesses being scarce. This means that meaning making and person perception processes of dehumanization in formal health-related contexts and regarding physical illnesses have been poorly examined. This clearly limits our understanding of the upstream psychosocial mechanisms underlying the interpersonal and technical processes in clinical encounters that are of concern for patient-centered care (Rathert et al., 2012). Indeed, the burden of dealing with others' suffering may lead to

perceiving patients as less human as a protective mechanism (Hunsaker et al., 2015; Peery, 2010;

Vaes & Muratore, 2013), which may consequently have an impact on health care delivery.

Moreover, although pathological experiential processes associated to professional burnout, such as depersonalization, may lead to other dehumanization (Capozza, Falvo, Boin, & Colledani, 2016; Haque & Waitz, 2012), the associations between such processes has been under-explored.

Exceptions were the studies by Trifiletti et al. (2014) and Vaes & Muratore (2013), which focused on health-care professionals' mental health, but still shed no light on the detrimental consequences of dehumanization on patients, the clinical encounter or the quality of care.

Second, many studies offered an asocial and decontextualized view of dehumanization in health-related contexts, by often ignoring victims' social and cultural backgrounds. Many did not ask participants about SES or ethnic backgrounds, or disregarded the information in the analyses. Those studies which indeed specified these characteristics frequently relied on (white) middle-SES samples, mostly young female adults. This trend is most likely a consequence of the high percentage of self-objectification studies, mainly derived from a feminist approach with a stronger focus on women. Indeed, very few studies have looked at men or older adults as victims of dehumanization, even though older people are more often dehumanized than young people (Boudjemadi et al., 2017) and men may also be denied humanness (Capozza, Falvo, Trifiletti, & Pagani, 2014; Fasoli et al., 2013). This trend is at odds with most social psychology studies that typically focus on social minority groups, who are at an increased risk of dehumanization (Diniz et al., submitted; Haslam, 2006; Haslam & Loughnan, 2014; Haslam & Stratemeyer, 2016; Volpato et al., 2017). Research has also been typically performed in Anglo-Saxon countries (71.3%), leaving other cultural contexts under-explored. In sum, by disregarding aspects such SES or ethnical/cultural background, research fails to link interpersonal aspects to social and cultural ones *e.g.*, how shared belief-systems or representations of class and race and their link to power asymmetries impact dehumanized health-related relations. This is a striking blind spot in this

literature, as social psychology has clearly shown that some ethnic, gender and class-based groups are at increased risk of dehumanization (Gwinn, Judd, & Park, 2013; Haslam, 2006; Haslam & Stratemeyer, 2016; Kraus et al., 2017; Volpato et al., 2017), which ultimately may account for social disparities in health (Bernardes & Lima, 2010; Lott, 2012). In other words, our findings point out to the relevance of investigating the role of dehumanization processes in accounting for social disparities in health and health care.

Third, this set of studies also offers a one-sided approach to dehumanization in health by failing to integrate the perspectives of actors and victims of dehumanization. Indeed, excluding self-dehumanization studies, where individuals are both actors and victims, most studies either focused on actors' or victims' perspectives. Given that recent social-psychological perspectives argue that dehumanization is a two-way interpersonally-enacted process (Bastian et al., 2014), the relational dynamics underlying self and other dehumanization in health-related contexts are a relevant topic still underexplored. Hence, there is a need for future studies integrating both actors' and victims' perspectives, for example by relying on dyadic designs to uncover the relational dimensions of dehumanization processes, namely, in clinical encounters.

Theoretical and empirical perspectives on dehumanization in health

Most of the retrieved studies focused on self-dehumanization. This is in part accounted for by the dominance of the self-objectification theoretical framework (Fredrickson & Roberts, 1997). However, emerging theoretical perspectives can be identified, which are moving the field beyond self-objectification. Studies drawing upon social psychological dehumanization theories (Haslam, 2006; Leyens et al., 2001) start uncovering the role of other dehumanization processes in health, whereas studies drawing upon discursive psychology (Potter, 1996) and social representations (Moscovici, 1984) provide insights into the role of meaning-making, language and communication

in such processes. An analysis of the empirical trends and gaps drawing upon these theoretical perspectives now follows.

Self-dehumanization processes: A dominant focus on self-objectification

Self-dehumanization studies mostly rely on cross-sectional designs to investigate what is, according to some authors (Haslam, 2006; Haslam et al., 2013), one very specific form of dehumanization: self-objectification, *i.e.*, the internalization of the notion of oneself as being a sexual object (Friedrickson & Robert, 1997). Given the gender-based theoretical approach of Self-objectification Theory, most of these studies examine self-objectification consequences to various domains of young women's health: mental health, eating, and sexual and reproductive behaviors. Overall, most studies showed that self-objectification bears negative consequences for an individual's health (Friedrickson & Robert, 1997; Moradi & Huang, 2008). Researchers have also been moving beyond the investigation of direct effects of self-objectification on health outcomes, uncovering some of its mediating mechanisms (*e.g.*, body concerns, sexual self-efficacy, appearance, anxiety) and modulating conditions (*e.g.*, self-compassion). Also, but to a much lesser extent, some studies analyzed the determinants of self-objectification, mostly focusing on contextual/situational aspects, *e.g.* how working environment influences self-objectification. This trend highlights the increasing proliferation of research drawing upon Friedrickson and Robert's Self-objectification Theory (1997), which has been systematically reviewed by several authors (Jones & Griffiths, 2015; Schaefer & Thompson, 2018), and has grown into a solid and empirically-based theory accounting for gender disparities in health (Gervais et al., 2013; Moradi & Huang, 2008). Nevertheless, as the psychosocial determinants of self-objectification have been less examined, hence hampering the development of prevention programs, this may be a promising avenue for future research.

The dominant focus on self-objectification has also left other forms of self-dehumanization and their association with health untapped. Indeed, only five studies have identified other forms of self-dehumanization, by examining representations of one's own body (*e.g.*, seeing oneself as contaminated, a machine, a couch potato) and uncovering its relation to individuals' health and attitudes (ID#3, 9, 24, 34, 56). For instance, the body represented as contaminated or a couch potato was related to feelings of social isolation and body dissatisfaction (ID#3, 9), whereas people who represented the body as a machine were more favorable toward organ donation (ID#24) or to the use of hormonal contraception (ID#56). These findings suggest that different forms of self-dehumanization bear different consequences upon health, but this topic has not been systematically investigated. The lack of studies examining personal, relational or situational accounts of the distinct forms of self-dehumanization limits the design of evidence-based prevention and intervention programs aiming at reducing the impact of self-dehumanization processes on health outcomes.

Other-dehumanization processes: A main focus on actors' denial of human uniqueness, its individual determinants and consequences for victims' mental health.

Studies of other-dehumanization processes in health are still scarce (20.3%). Most drew upon the dual models of dehumanization (Haslam, 2006; Leyens et al., 2001), experimentally examining the determinants and/or consequences of the denial of human uniqueness (ID#25, 41, 45). The denial of aspects of human uniqueness related to higher cognitive skills (*e.g.* ability to think, plan, reason) was more commonly investigated than the denial of civility and culture; this may be accounted for by the higher relevance of the former in tasks involved in clinical encounters (*e.g.*, ability to understand clinical information and informed decision-making). The examination of animalistic dehumanization is indeed relevant in health-related contexts, as it may often bear subtle implications for interpersonal, communication and decision-making processes in the clinical

encounter (*e.g.*, subtle disrespect, condescension; Bastian & Haslam, 2011), which may ultimately account for disparities in health outcomes, adherence to health recommendations and health-care delivery. It should be noted, however, that the lack of studies on the denial human nature is intriguing, as many authors have shown that medical settings often objectify patients by denying their personal accounts and experiential depth (Haque & Waitz, 2014; Todres et al., 2013).

As far as the determinants of other-dehumanization are concerned, most studies examined what makes actors (*e.g.*, health-care professionals) dehumanize victims (*e.g.*, patients), but failed to consider what makes victims feel more or less dehumanized. In other words, these studies have been mostly conducted from the actors' perspectives, failing to examine dehumanization experiences from the victims' perspectives, as has been recently called for (Bastian et al., 2013; Haslam et al., 2013; Moradi, 2013). Moreover, most determinants pertained to intra-individual aspects of the actor (*e.g.*, skills, beliefs) and/or the victim (*e.g.*, cognitive abilities), leaving unexplored the extent to which interpersonal, situational/contextual aspects (*e.g.* power asymmetries, communication, time pressure) influence other-dehumanization dynamics in health-related contexts (Bastian et al., 2013; Haque & Waitz, 2012). Again, this is at odds with dominant research in social psychology, which has been examining interpersonal and situational determinants of dehumanization processes (Gwinn et al., 2013; Haslam & Loughnan, 2014; Waitz & Epley, 2012).

As to other-dehumanization consequences, most studies focused on mental health. Whereas dehumanizing others may buffer against burnout and distress in the case of health-care professionals (ID#51, 54), being the victim of dehumanization is detrimental to mental health (*e.g.*, increased anxiety, negative emotions; ID#49, 59). These results mirror previous findings in other interpersonal contexts showing that although other-dehumanization may bear detrimental consequences on its victims, it may play a protective function for the actors (Bastian et al., 2013). The negative consequences (*e.g.*, guilt) of other-dehumanization for the actors (*e.g.*, health

professionals) have, however, been less explored and should be further investigated. This set of findings also leaves unexplored the extent to which other-dehumanization may affect health domains beyond mental outcomes, such as treatment adherence or doctor-patient communication. Finally, personal (*e.g.*, victims' sex; ID#1, 51, 59) and situational (*e.g.*, contact with patients; ID#54) conditions modulating other-dehumanization consequences start to be uncovered. Still, the identification of conditions that may enhance or suppress the consequences of other-dehumanization on actor/victim health-outcomes remains scarce.

Dehumanizing metaphors of the body: A variety of dehumanizing meanings and their functions

Around 25% of the studies identified a variety of dehumanizing metaphors to depict healthy and ill bodies. Like most studies on social representations of the body (Camargo et al., 2010; Lauri, 2009), these studies mostly investigated metaphors used by lay-people to depict their own bodies in informal health-related contexts. However, studies on health professionals' representations about patients' bodies are emerging (ID#15-16, 26, 35, 38, 43), but mainly focus on specific health conditions, *e.g.*, pregnant or breastfeeding women, people who are transgender, older people.

The most common metaphors are objectifying ones, and they include using a machine metaphor to explain body functioning or using a sexual object metaphor to depict women. The salience of these metaphors is not surprising, taking into account that the machine metaphor is widely used to communicate about body functioning and illness processes (Semino, Demjén, & Demmen, 2016; Stelmach & Nerlich, 2015) and women are typically reduced to physical attributes over psychological ones (Fredrickson & Roberts, 1997; Gervais et al., 2013). Other metaphors to present overweight bodies (*e.g.* couch potatoes) or people with illness (*e.g.* victim, contaminated) also emerged, revealing their negative accounts on social interactions (ID#3, 9).

The variety of dehumanizing metaphors shows how specific attributes of the victim may be highlighted or suppressed, eliciting different attitudes and behaviors from others (Tipler & Ruscher,

2014). For instance, the body as a “faulty machine” was used to illustrate individuals’ reduced performance, hence inducing supervision and care; whereas the “contaminated body” emphasized the risk of contamination, eliciting disgust and fear. Also, different versions of the same metaphor (*e.g.* failing machine, faulty machine, competitive machine; ID#12, 15, 35, 46) could influence dehumanization processes by highlighting different attributes of the person, eliciting different emotions and behaviors toward others: *e.g.*, the “failing machine” metaphor illustrated a reduced performance and the “competitive machine” excelled performance abilities; whereas the former appealed to supervision and care, the latter elicited mistrust and envy. Overall, these results highlighted the role of metaphors on meaning-making of the self and others (Sontag, 1978).

Although this set of research revealed the variety of metaphors and their functions in health contexts, considering the potential role of metaphors in structuring thought and decision-making (Thibodeau & Borodstky, 2011; Tipler & Ruscher, 2014), a systematic investigation of their implications for individuals’ attitudes and behaviors towards themselves and on their interpersonal relationships in health contexts is still scarce. Also lacking is a more ambitious examination of the preferential patterns of metaphors implicated in describing people with medical conditions of all types: for instance in the press, or in official documents that support medical decision-making.

Limitations and future directions for research

The present study has some limitations. First, as it did not include the “grey literature” it does not cover potentially relevant scientific articles that were not classified in the searched databases. Second, in order to identify articles examining the meaning-making and person perception processes of dehumanization in health-related contexts, we decided to cast our net wide and include broad and general key-words, such as health, illness, disease. It is possible, however, that articles related to the topic that were indexed with more specific key-words (*e.g.* body weight, eating behavior) have not been included. Third, as we were exclusively focusing on “normal”

everyday meaning-making and person perception processes of dehumanization, literature examining pathological processes potentially related to dehumanization (*e.g.*, burnout, compassion fatigue) were left out. Fourth, as far as the methods of critical reviews, there is no attempt to determine the effects of size or assess the quality of the studies, which precludes any attempts to draw practical or clinical implications. Nonetheless, the study provides a critical overview of research published on psychosocial meanings and processes of dehumanization in health-related contexts, which, by identifying its main trends and gaps allows us to point out some directions for future research.

First, future studies should offer a more contextualized and integrated view of dehumanization in health-related contexts, by exploring health-related dehumanization in connection with socio-cultural backgrounds and social groups. As research shows that members of social minorities and lower status groups are more often dehumanized (Gwinn et al., 2013; Haslam & Stratemeyer, 2016; Volpato et al., 2017), further research on the extent to which dehumanization processes may account for social inequities in health is needed.

Second, research on self-dehumanization processes beyond self-objectification is needed. For example, considering the increasing rates of chronic diseases worldwide, it is relevant to assess how the internalization of disease-related stigma (DeRuddere & Craig, 2016) may influence self-dehumanization processes.

Third, more studies on other-dehumanization in health-related contexts are needed to examine a broader range of its determinants and consequences, and to take the analysis beyond mental health outcomes. This is particularly relevant for mechanistic dehumanization, which has been less thoroughly examined. It would specifically be important to develop a better understanding of the relational and contextual determinants of other dehumanization and its consequences. We recommend the investigation of interpersonal correlates (*e.g.*, communication, information sharing, decision making), as these may shed some light onto the psychosocial predictors of Patient Centered Care relational practices (Dwanena et al., 2012; Lewin et al., 2001).

Finally, there is a call for studies simultaneously observing actors'/victims' perspectives and the dynamics of their relationship in health contexts. Dyadic designs will allow capturing how individual accounts of actor/victim dehumanization influence and are influenced by interpersonal processes, namely dimensions of communication (*e.g.* reciprocity, power; Bastian et al., 2013; Gwinn et al., 2013; Waytz & Epley, 2012). These approaches will also provide inputs about dehumanization processes in (hierarchical) interpersonal relations, as a two-way enacted process (Bastian et al., 2013), as well as the empirical relation of self and other dehumanization processes. The investigation of intra-individual pathways (*e.g.*, cognitions, emotions) and the role of personal/contextual aspects to modulate interpersonal relations are also important developments for future research.

Overall, current research depicts a whole range of psychosocial processes of dehumanization and their interconnectivity not only in formal health contexts, but also in everyday interactions, bridging some of the gaps left by health service research (Dwanena et al., 2012). Being an emerging field of research, there is a call for a broad and more contextualized understanding of self and other dehumanization on formal health-related contexts and beyond, as an important stepping stone to tackle current inequalities in health.

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