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Self-dehumanization in severe alcohol use disorder (SAUD): Links with self-stigma and environmental satisfaction

Short title: Self-dehumanization and self-stigma in SAUD

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Abstract

Background

Metadehumanization (i.e., the perception of being considered as less than human by others) is proposed to be widespread in stigmatized populations, such as people with severe alcohol use disorder (SAUD). However, the relations between metadehumanization, self-dehumanization (i.e., the self-perception of being less than human), and stigmatization (i.e., the negative taint applied to some groups) remain unexplored. The aim of this research is thus to investigate the relations between these processes.

Methods

Metadehumanization, self-dehumanization, self-stigma (and its subdimensions), and environmental satisfaction were assessed in 120 inpatients with SAUD and analyzed in a mediational model.

Results

Stigma awareness was positively associated with metadehumanization, whereas environmental satisfaction was negatively associated with metadehumanization. Stigma's application to the self was associated with increased self-dehumanization.

Conclusions

Self-stigma and self-dehumanization are closely intertwined phenomena. Self-dehumanization seems to follow a multi-step process suggesting that some steps, such as dehumanization awareness, are missing from current models of dehumanization.

Keywords: infrahumanization; dehumanization; mind attribution; stigmatization; discrimination

Introduction

Dehumanization, defined as the denial of other individuals' humanness, has often been associated with stigma, defined as a profoundly discrediting attitude towards another individual or group (Haslam, 2006; Mak et al., 2007). Both dehumanization and stigmatization have been reported against people with mental illness (Harris & Fiske, 2006; Svili et al., 2018). People with mental illness are perceived as less human and more dangerous than those with organic illness (Martinez et al., 2011). Furthermore, Svili, Sakalaki, & Richardson (2018) showed that people with mental illness are more dehumanized than healthy individuals. Similarly, people with mental illness face high levels of stigmatization (Corrigan, 1998). Both dehumanization and stigmatization are associated with poor interpersonal treatments. Stigmatization is linked to reduced helping and increased avoidance tendencies (Corrigan et al., 2009). Dehumanization has been suggested to be endemic in medicine (Haque & Waytz, 2012; see Diniz et al., 2019 for a review of dehumanization in health-related contexts) and, in other domains, it is also linked to a wide range of negative interpersonal behaviors such as discrimination, aggression, or rejection toward the victims (Haslam, 2006).

The consequences of stigmatization and dehumanization processes are thus well established; however, most studies focused on the perpetrator's perspective, thus neglecting the victims (Bastian & Haslam, 2011). Studies on stigmatization from the victims' perspective (i.e., self-stigma, stigmatization toward his/her self) nevertheless revealed that self-stigma constitutes a barrier to treatment-seeking and can lead to reduced self-efficacy (Corrigan et al., 2009). Regarding the field of dehumanization, the few studies on metadehumanization (i.e., the perception of being dehumanized by others) revealed a wide array of adverse outcomes for victims, including negative emotions, reduced self-esteem, disrupted coping strategies, aversive self-awareness, states of cognitive deconstruction, and unsatisfied fundamental needs (Bastian & Haslam, 2011; Nguyen & Stinglhamber, 2018). Furthermore, feeling dehumanized by others can also lead victims to dehumanize their perpetrators in return, thus leading to vicious dehumanization cycles (Kteily & Bruneau, 2017). People ostracized by others believe they are dehumanized by them and tend to dehumanize them in return (Bastian & Haslam, 2009). Self-dehumanization (i.e., the self-perception of being less than human) has been less investigated, and its consequences are still mostly unknown.

While past studies offered preliminary insights on the relations between dehumanization and stigma from the perpetrators' perspective (e.g., Harris & Fiske, 2006), nothing is known about the links between metadehumanization (i.e., the perception of being dehumanized by others), self-dehumanization (i.e., the self-perception of being less than human), and self-stigma (i.e., stigmatization toward his/her self) in dehumanization victims. It thus appears urgent to explore these variables, notably because dehumanization and stigma are related to relapse factors such as negative emotions, negative self-perceptions, and disrupted coping strategies (Fontesse et al., 2020).

Additionally, previous research has focused on interpersonal factors (e.g., social ostracism predicts metadehumanization [Bastian & Haslam, 2009]) and situational factors (e.g., being in a low power position is associated with self-dehumanization [Yang et al., 2015]) related to metadehumanization, thus neglecting environmental factors. The proposal that some environments might be dehumanizing has long been proposed at the theoretical level only (Liebling, 2011). However, a recent study (Taskin et al., 2019) provided the first empirical support for this proposal by showing that flexible office designs were associated with employees' perception of being dehumanized by their organization. This link has been interpreted as

related to the depersonalized aspect of such designs, employees reporting feelings of dispossession, abandonment, and pressure to adopt new behaviors (Taskin et al., 2019).

Thus, our study aims to complement previous research on self-stigma, metadehumanization, and self-dehumanization by empirically exploring the relations between these processes and the role of the participants' evaluation of environment in this context. Moreover, these processes will be investigated in patients with severe alcohol use disorder (SAUD) as they report feeling stigmatized (Schomerus et al., 2011) and dehumanized (Fontesse et al., 2020); they thus constitute an ideal population to study these processes.

There is currently no empirically tested model of metadehumanization and self-dehumanization in SAUD. However, we capitalized on the most validated tool to measure stigma and self-stigma (i.e., the Self-Stigma in Alcohol Dependence Scale, SSAD) to distinguish four steps in the emergence of self-stigma (Schomerus et al., 2011): (1) becoming aware of the stereotypes existing against one's group (*aware*); (2) agreeing to some extent with these stereotypes (*agree*); (3) applying the stereotypes to oneself, through one's belonging to the group (*apply*); (4) after completion of the three first steps, the integrated self-stigma might

harm self-esteem (*harm*). These four dimensions of self-stigma are distinctively associated with specific factors among patients with SAUD: agreeing with the stigma is associated with an increased desire for social distance, applying the stigma is linked to increased duration and severity of drinking problems, and depressive symptoms have been associated both with the apply and harm dimensions (Melchior et al., 2019; Schomerus et al., 2011). The subdimensions of the SSAD have never been studied with metadehumanization and self-dehumanization; this article thus aims to uncover their relations.

Theoretically, the first dimension of SSAD (*aware*) should be associated with metadehumanization (Hypothesis 1) while the others (*agree, apply, and harm*) should be associated with self-dehumanization (Hypotheses 2, 3, and 4), as they constitute self-perceptions whereas other factors are group (people with SAUD) perceptions. Furthermore, the link between metadehumanization and self-dehumanization will be investigated to complement the current knowledge of these processes. Theoretically, we expect self-dehumanization to stem from the integration of metadehumanization. Namely, because one perceives dehumanization from others, he/she might integrate this perception in his/her self-perception. Metadehumanization and self-dehumanization should thus be

positively associated (Hypothesis 5). This study also investigates if metadehumanization mediates the links between self-stigma dimensions and self-dehumanization (Hypothesis 6).

To explore the links between environmental factors and dehumanization, an additional aim of our research is to investigate whether patients' environmental satisfaction is associated with meta/self-dehumanization. We hypothesized that safe, calm, and personalized environments would be more humanizing than dangerous, noisy, and impersonal environments (Hypothesis 7).

Methods

Participants

Patients with SAUD, as diagnosed by a psychiatrist following DSM-5 criteria, were recruited during detoxification treatment. To be eligible for recruitment, patients had to be abstinent for at least 14 days (range=14-421 days) and had to be free from other major medical problems or neurological diseases. We recruited 120 patients with SAUD (mean age=48.3, S.D.=10.9, range=24-74; 86 males). All patients provided written informed consent to participate. Before detoxification treatment, patients had a mean consumption of 19.45 standard alcoholic drinks (containing 10g of alcohol)

per day. Participants had an average SAUD duration of 13.6 years (S.D.=10.88, range=0-45). Most of our sample was single (30%) or divorced (21,7%), but a good part was in a couple (19,2%) or married (15,8%). Regarding education level, most of our sample had a high school education or less (46,7%), but a large amount had a university (or equivalent) diploma (41,1%).

Materials

Metadehumanization

A 13-item scale ($\alpha=.93$) was developed to assess patients' metadehumanization (see Supplementary Material 1). This scale focused on how participants felt dehumanized by society (e.g., "As an alcohol-dependent person, society treats me as a sub-evolved being," "As an alcohol-dependent person, society treats me as if I was mechanical and cold, like a robot"); A mean score (range=1-7) was computed based on participants' answers on this 7-point Likert scale.

Self-dehumanization

The dehumanization scale was adapted —items were reworded to assess self-perceptions instead of others' perceptions— to measure participants' self-dehumanization with 13 items ($\alpha=.79$, e.g., "As an alcohol-

dependent person, I sometimes consider myself as a sub-evolved being,").

A mean score (range=1-7) was computed based on participants' answers on 7-point Likert scales.

Self-Stigma in Alcohol-Dependence (SSAD)

The SSAD (Schomerus et al., 2011) presents 16 stereotypes against alcohol-dependent people (e.g., violent, disgusting, unpredictable) and measure participants' awareness ($\alpha=.92$), agreement ($\alpha=.89$) and application ($\alpha=.86$) of these stereotypes, as well harm to participants' self-esteem ($\alpha=.88$) using a 7-point Likert scale. A mean score (range=1-7) was computed for each dimension.

Environmental satisfaction

A scale of environmental satisfaction was developed to assess patients' evaluation of various aspects of the clinical context (i.e., satisfaction regarding the hospital cleanliness/security/noise, intimacy respect, and general satisfaction level regarding hospital environment; see Supplementary Material 2) on a 7-point Likert scale (from "Totally unsatisfied" to "Totally satisfied"). A mean satisfaction score (range=1-7) was computed ($\alpha=.79$).

Procedure

Patients were recruited in six Belgian hospitals during their detoxification stay. They completed a survey in two one-hour sessions. This study is part of a larger project on metadehumanization in SAUD. The data used in this paper was extracted from the same large database used in Fontesse et al. (2020). Participants' responses on the metadehumanization scales have thus been reused. However, all the relations investigated in this paper are completely original.

Statistical analyses

Statistical analyses were conducted on StataSE 15 and SPSS 25. The path analysis model was estimated using maximum likelihood with missing values. This type of analysis allows more complex and controlled model testing than classical regressions; all relations entered in the model are controlled for all other relations considered.

Results

Patients reported a mean metadehumanization score of 3.2 (S.D.=1.42) and a mean self-dehumanization score of 2.86 (S.D.=1.06, see Table 1 for means and standard deviations of all scales and inter-scales correlations).

*Table 1. Descriptive statistics, Cronbach's alphas, and pairwise correlations between variables. N=120. Cronbach's alphas are between brackets on the diagonal. *p<.05; **p<.01; ***p<.001*

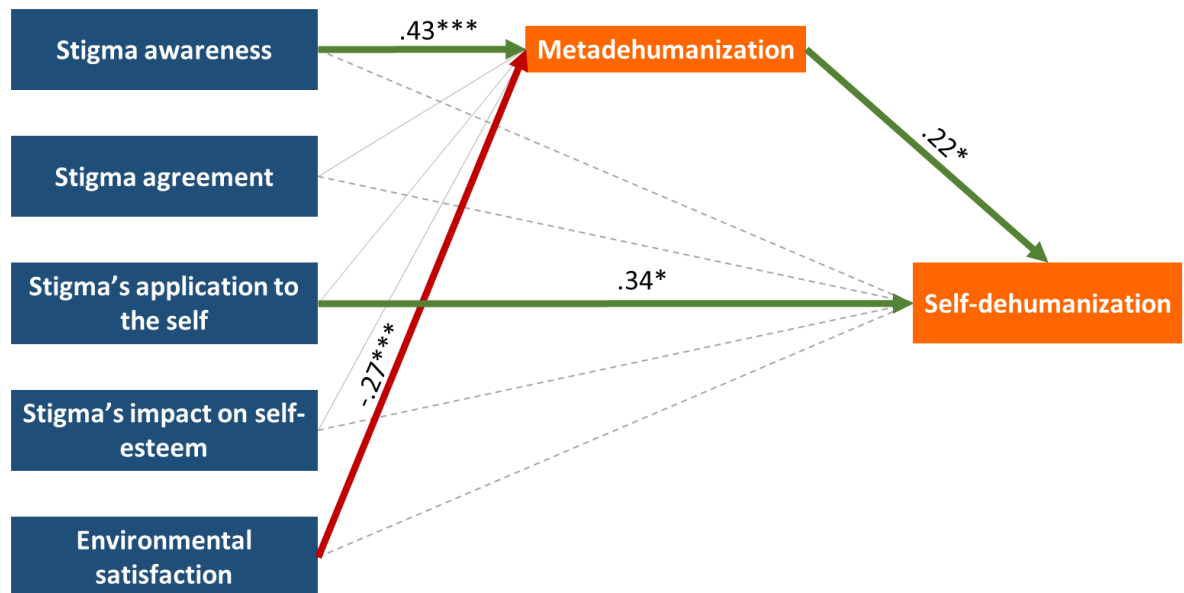
	M	S.D.	1.	2.	3.	4.	5.	6.	7.
1. Awareness (SSAD)	4.51	1.22	(.92)						
2. Agreement (SSAD)	3.34	1.04	.49***	(.89)					
3. Application (SSAD)	2.83	0.97	.40***	.63***	(.86)				
4. Harm (SSAD)	2.90	1.05	.37***	.55***	.82***	(.88)			
5. Environmental satis.	5.80	0.98	.13	.00	.05	.12	(.79)		
6. Metadehumanization	3.20	1.42	.49***	.31***	.47***	.44***	-.18	(.93)	
7. Self-dehumanization	2.86	1.06	.24*	.43***	.61***	.58***	-.08	.46***	(.86)

The path-analysis model examining the regressions between self-stigma' sub-dimensions and metadehumanization showed that stigma awareness was the only sub-dimension significantly associated with metadehumanization, $\gamma=.43$, $p<.001$. Other self-stigma dimensions were only marginally associated with metadehumanization (agree, $\gamma=-.17$, $p=.08$; apply, $\gamma=.24$, $p=.07$; harm $\gamma=.21$, $p=.09$). Environmental satisfaction was

negatively associated with metadehumanization, $\gamma = -.27$, $p < .001$, patients with higher satisfaction experienced lower metadehumanization.

Regarding self-dehumanization, applying the stigma to the self, $\gamma = .34$, $p < .05$, and metadehumanization, $\gamma = .22$, $p < .05$, were significantly associated with self-dehumanization. No other significant relation was found between self-dehumanization and other variables. The indirect effect of self-stigma sub-dimensions and environmental satisfaction to self-dehumanization through metadehumanization were then investigated: stigma awareness was indirectly linked to self-dehumanization through metadehumanization, indirect effect = .09, $p < .05$. Metadehumanization is thus a relevant mediator of the link between stigma awareness and self-dehumanization (see Figure 1).

Figure 1. Model tested, $\chi^2(11) = 126.52$; RMSEA = .000; CFI = .1; Significant standardized regressions paths are represented as large arrows, non-significant paths as dotted lines. Covariances (not represented) were entered between SSAD sub-dimensions.



Discussion

The present study was the first to investigate how self-stigma, metadehumanization, and self-dehumanization are linked in dehumanization victims, namely patients with SAUD. Our findings highlight that self-stigma and self-dehumanization demonstrate close associations as similar stages of these processes are linked (stigma awareness with metadehumanization and stigma application with self-dehumanization). This research also opens a new avenue by identifying that environmental satisfaction and metadehumanization are related, thus bridging environmental and social factors.

This study thus led to three main findings: (1) Stigmatization sub-components are differentially associated with metadehumanization and self-dehumanization (i.e., stigma awareness with metadehumanization [Hypothesis 1], stigma application to the self with self-dehumanization [Hypothesis 3]). Hypotheses 2 and 4 regarding the proposed link between stigma agreement and stigma's impact on self-esteem with self-dehumanization are not supported by our data. Thus, this study provides important theoretical clarification on the relations between (self-)stigmatization and meta/self-dehumanization.

(2) Metadehumanization and self-dehumanization are positively associated (Hypothesis 5). Experimental designs with manipulations are needed to examine if metadehumanization leads to self-dehumanization. Metadehumanization mediates the links between self-stigma and self-dehumanization (Hypothesis 6).

(3) Environmental satisfaction is associated with metadehumanization (Hypothesis 7). The (de)humanizing characteristics of hospitals' context should be further explored and considered in clinical settings.

This research thus adds to the current understanding of stigma and dehumanization. The specific pattern observed here, linking stigma awareness to metadehumanization and stigma application to the self to self-dehumanization, suggests that self-dehumanization might follow an integration process similar to the one described in self-stigma: victims might start by being aware of the dehumanizing perception others hold against their group, then they might agree with these perceptions, apply them to their self-perceptions (self-dehumanization), these three steps finally impacting self-esteem. This result is a promising perspective as there is currently no model linking metadehumanization to self-dehumanization. To completely understand dehumanization, we thus recommend investigating dehumanization's awareness, agreement, application, and harm in relation to interpersonal, situational, and environmental factors. Adopting a more precise perspective of dehumanization integration, detailed in multiple steps, is essential as researchers have been discussing dehumanization and self-dehumanization for more than forty years but the links between these variables are still poorly understood, thus limiting research on the subject as well as interventions for victims of dehumanization.

For example, as each step expresses an increasing level of integration of dehumanization, they might be differentially related to

patients' suffering. The first steps (awareness and agreement) might only negatively affect patients highly identified with their groups (patients who do not identify with their group might be unaffected by dehumanization toward this group). In contrast, later stages might affect every patient as the dehumanization is integrated and directed toward the self. Developing such a fine-grained model of dehumanization's integration could lead to identifying factors and strategies acting as buffers against the transition from metadehumanization to self-dehumanization, which would be beneficial to patients. It might indeed be easier to prevent the integration of dehumanization, and its negative consequences, than lower society's pervasive dehumanizing perception towards SAUD. Nevertheless, as dehumanization awareness is the first step to self-dehumanization, then tackling society's dehumanization of patients with SAUD should also be a primary goal, undertaken by multiple actors (e.g., researchers, healthcare practitioners, political decision-makers, and patients).

Our study also reports an association between environmental characteristics and metadehumanization, thus identifying a relationship between clinical context and dehumanization, beyond the role played by interpersonal factors. This effect was not observed through correlations but through a path-analysis model (controlling for self-stigma), indicating that

self-stigma' sub-dimensions play a central role compared to environmental satisfaction. In addition to social factors, healthcare workers willing to improve their patients' humanization should also consider environmental factors of patients' hospital stay. Moreover, we showed the potential impact of noise, security, cleanliness, intimacy, and general environmental satisfaction, but future studies could investigate other environmental characteristics. The presence of natural scenes and natural light have, for example, been associated with better recovery in physical illnesses (Ulrich et al., 2008). Many hospital physical characteristics (e.g., single-bed rooms, noise-reducing finishes, family zone in patient rooms) influence various healthcare outcomes (e.g., improved patient satisfaction and sleep, reduced hospital-acquired infections, reduced medical errors, improved social support (Ulrich et al., 2008). However, such findings have not yet been implemented in psychiatric settings. As a whole, the hospital environment might influence how a patient experiences the hospital stay and notably how humanized he/she feels during the stay. Other environmental characteristics (e.g., architectural style, individual spaces personalization, room coziness) might also be associated with patients' metadehumanization (Bil, 2016). They should be explored in the future, but the global aim should be to optimize the physical environment in every

clinical setting, given its association to patients' humanization and health. To conclude, we borrow the words of Bil (2016): *"Mental health architecture should be neither the architecture of madness nor the architecture of stigma, but an architecture of therapy, humanity and safety."*

Limitations and perspectives

This work is based on cross-sectional data that do not allow for causal interpretations. Some scales have been created for this research and lack validation, which might limit the validity of the findings. The application of our results to other populations should be checked in future research. Nevertheless, this research opens new avenues for future studies. Namely, the possibility that metadehumanization leads to self-dehumanization should be tested experimentally. The characteristics of the hospital environment that contribute to patients' dissatisfaction and to their metadehumanization should also be identified. Furthermore, other environments might be dehumanizing (e.g., prisons, schools, administrations, factories), but research on the topic is almost non-existent. Future research should thus identify and compare dehumanizing and humanizing environments.

Conclusion

Patients' awareness of the stereotypes against people with SAUD (stigma awareness) was associated with more metadehumanization. Stigma awareness was also indirectly linked to self-dehumanization through metadehumanization. Moreover, patients' agreement with the stigma was associated with increased self-dehumanization. Self-stigma, metadehumanization, and self-dehumanization are distinct but closely intertwined concepts, and interventions fighting stigmatization/dehumanization may impact both phenomena. Finally, patients' satisfaction with hospitals' environments is associated with less metadehumanization. Optimizing these environments might constitute a promising way to reduce dehumanization.

Ethical Compliance Section

Funding

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Compliance with Ethical Standards

All procedures contributing to this work comply with the ethical standards of the Helsinki Declaration of 1975, as revised in 2008. All procedures involving patients were approved by the bioethical committee of the University (Cliniques Universitaires Saint-Luc, UCLouvain, Belgium; approval number B403201732246).

Conflicts of Interest

The authors declare that they have no conflict of interest.

Informed Consent

Informed consent was obtained from all individual adult participants included in the study.

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