A study on COVID-19-related stigmatization, quality of professional life and professional identity in a sample of HCWs in Italy

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Abstract. *Background and aim*: Perceived COVID-19-related stigmatizations have a strong impact on healthcare workers' wellbeing and quality of professional life, decreasing satisfaction and increasing fatigue. This work aims at investigating the role of professional identification in moderating the impact of COVID-19-related stigma on the quality of professional life in a sample of healthcare professionals working in hospital settings. *Methods*: A cross-sectional design in which a web-based questionnaire was sent to professionals was used to collect answers from 174 participants, most of whom were women and nurses. *Results*: Perceived stigma was negatively related to compassion satisfaction and positively related to an increase in both burnout and secondary traumatic stress. Professional identification had a positive correlation with satisfaction and a negative correlation with burnout, but this was not directly related to secondary traumatic stress. Importantly, stigma and identification interacted so that stigma decreased compassion satisfaction only when identification was low, and increased secondary traumatic stress only when identification was high. No interaction effect appeared for burnout. *Conclusions*: Experience of stigmatization has the potential to decrease the quality of professional life in healthcare professionals. Professional identification seems to help professionals in maintaining a higher level of compassion satisfaction and in limiting burnout. However, professional identification seems also to be associated with vicarious trauma experienced following stigma. (www.actabiomedica.it)

Key words: stigmatization healthcare professionals, COVID-19, professional identification, professional quality of life

Introduction

The recent COVID-19 pandemic has dramatically impacted the lives of people around the world, requiring an exceptional effort to manage everyday life as well as the functioning of healthcare structures. The pandemic has engendered fear and anxiety in the population and allowed for new forms of discrimination, exclusion, and social tension (1,2). One of the most "puzzling" phenomena that have been observed is the general population's fear of being infected by healthcare workers (HCWs) as HCWs were (and are) seen as potential carriers for the spread of infection (3,4). In some cases, this fear has been so strong as to lead people and patients to discriminate, distance, exclude, and even attack healthcare professionals (5). In short, HCWs have faced stigmatization, that is to say, discrimination and social exclusion that are based exclusively on their professional category. For example, Taylor et al. (6) reported that over a quarter of a sample of more than 3,500 non-HCW adults from the United States and Canada believed that HCWs should have severe restrictions on their freedom and be isolated from others (including their own families). Furthermore, over a third of the sample reported fear of being infected by HCWs. Moreover, also second-

ary stigmatization has been observed, as families of HCWs have experienced episodes of social exclusion and devaluation, discrimination, as well as malicious gossip and verbal assault (7,8). While stigma against HCWs seems to be a consistent and widespread phenomenon, research on its impact on HCW's wellbeing is rather sparse. Some evidence indicates that episodes of stigmatization have the potential to affect HCW's wellbeing in several ways. For example, the perception of COVID-19-related stigmatization has been associated with increased anxiety and depression as well as with decreased psychological well-being in HCWs (9). Moreover, Ramaci et al. (10) showed that perceived COVID-19-related stigmatization decreased satisfaction and increased fatigue in HCWs. This evidence, albeit limited in number, seems to highlight that stigmatization might have a strong impact on the wellbeing of HCWs both inside and outside the workplace. In the present research, we tried to further investigate the effect of perceived stigmatization on the quality of professional life of HCWs, considering the role of an important, albeit still under-investigated, aspect of professional life, that is to say, professional identification.

Professional identification and stigmatization

Professional identification could be defined as the extent to which people feel tied to their professional category (11,12). Professional identity is a part of individuals' social identity, that is to say, the knowledge that individuals have of themselves as members of particular groups (13). Social identity, along with professional identity, helps people to know who they are in a given context and situation and contributes to people's self-esteem (14,15). The more people are identified with one social group, the more the outcome of the ingroup will affect (positively or negatively) people's self-evaluation (15) and, usually, people prefer to belong to groups that are positively evaluated (e.g., high status) as this contributes to reaching or maintaining a positive social identity and positive self-worth (13). According to social cure model (15,16), which represents the attempt to apply the social identity approach to the health domain, social identity (and social identification) is an important determinant of people's health at many levels, affecting people's wellbeing both positively and negatively. Accordingly, it has been shown that strongly identified professionals are less likely to leave their profession (17,18), more satisfied with their job (19,20), more likely to be engaged with, and resilient against, job demands, less likely to develop burnout, and more likely to perceive themselves to be efficacious as professionals, both at the individual (self-efficacy) and collective (collective-efficacy) level (21-26). Some evidence also suggests that social identification can moderate the effect of stigma on people's wellbeing, although this effect could take different forms (27). On the one hand, a strong identification with a stigmatized group would contribute negatively to self-worth and this, in turn, could lead to worsening health outcomes such as experiencing depressed entitlement, depression, distress, and anxiety (27,28). On the other hand, strongly identified people could perceive they have strong ingroup social support, satisfy their needs of belonging and meaning, so that they could be well equipped to face the negative impact of stigmatization (29). In the case of COVID-19-related stigmatization, it is worth noting that HCWs usually enjoy positive social evaluations as professionals who help and care for suffering people and start to experience stigmatization of their professional category abruptly and recently. So it is to be expected that stronger identification would help professionals to manage better the weight of stigmatization. Thus, in this case, our expectation was that stigma would reduce the quality of professional life in general and especially for weakly identified professionals.

To sum up, we expected that perceived stigmatization following the COVID-19 pandemic would a) reduce the perceived quality of professional life of HCWs and b) interact with professional identification so that the detrimental effect of stigma on the quality of professional life would be different depending on levels of professional identification with weakly identified professionals being more impacted by stigmatization. A further expectation was that professional identification, as a resource for health and wellbeing would be associated with better HCW quality of professional life.

Methods

Design and procedure

We used a cross-sectional design in which a web-based questionnaire was sent to professionals. In the beginning, participants read the informed consent and, in case of agreement, they started the questionnaire. Given that we collected no personal information, participants were adults and completely anonymous, and participation was voluntary, Ethics Committee Approval was not required in accordance with the national laws (see Considerando 26(30)).

Participants

We recorded 240 accesses to the survey. Of those, two did not consent to proceed and seven failed the attention check item (see below). Of the 231 remaining participants, only 174 completed the questionnaire and were then analyzed. Of those, 147 were female (84.5%), 24 were male (14%) and four preferred not to indicate their gender. Fifty-one (29%) participants were up to 35 years old, 69 (40%) were up to 50 years, 53 (30%) were up to 75 years (one participant did not report his/her age). One hundred and forty-four (83%) were nurses. About half of the sample had a tenure of more than 20 years. One hundred and eleven (64%) had worked or were working in a COVID ward.

Measures

Professional quality of life was measured with ProQol 5 (31) which is composed of 30 items on a 5-point Likert scale (1 = never, 5 = very often). The ProQol is a widely used instrument to assess the quality of life in helping professionals and measures three dimensions. Compassion satisfaction is defined as the satisfaction that professionals take from helping suffering people. Burnout, in this theoretical framework, is a unidimensional construct (32) combining emotional exhaustion, cynicism, and reduced accomplishment. Finally, secondary traumatic stress is defined as a negative feeling arising from having experienced, or witnessed, work-related traumatic events (33). Burnout and secondary traumatic stress are part of so-called fatigue, that is to say, negative outcomes related to working with suffering persons. While burnout captures the effects of prolonged exposure to stressful events (i.e., it has a gradual onset), secondary traumatic stress captures the sudden impact of being directly or indirectly exposed to very stressful work-related events. In the present research, scales showed good reliability ($a_{compassion\ satisfaction}$ = 0.91; $a_{burnout}$ = 0.82 and $a_{secondary\ traumatic\ stress}$ = 0.84) and final scores were computed as the mean of intended items.

Perceived stigmatization was measured by a scale developed by Mostafa et al. (34) The scale consists of 17 items that ask participants to indicate the extent to which they agree (1 = strongly disagree, 7 = strongly agree) with statements capturing personalized stigma, disclosure concerns, self-image and concern with public attitude (e.g., "Being an HCW, I feel set apart and isolated from the rest of the world" and "People seem afraid of me once they learn I am an HCW"). The reliability of the scale was good (a = 0.93) and the final score was computed as the mean of all items.

Professional identification was measured with 12 items (35) asking participants to indicate their agreement (1 = completely disagree, 7 = completely agree) with some statements referred to their membership in the professional category (e.g., "On the whole, I am happy to be part of my professional category" and "In general, I feel good when I think I belong to my professional category"). Reliability was good (a = 0.84) and the final score was computed as the mean of the items.

Additional measures

Self-esteem was assessed with the Rosenberg's self-esteem scale (36) which consists of 10 items asking participants to indicate their agreement (1 = completely disagree, 7 = completely agree) with some statement referred to one's self-perception (e.g., "On the whole, I am satisfied with myself" and "I feel that I have a number of good qualities"). Reliability was good (a = 0.82) and the final score was computed as the mean of items.

Attention was checked with one item asking participants to indicate none of the possible choices on a

1-5 Likert scale. If a participant answered this question, it was assumed that he/she was likely to have not read the text and thus had filled in the questionnaire inaccurately.

Results

Preliminary analysis

Table 1 reports zero-order correlations and descriptive statistics of the considered variables. As can be seen, correlations were significant and in the expected direction. In particular, professional identification was positively linked to higher self-esteem and compassion satisfaction and negatively related to burnout, secondary traumatic stress as well as perceived stigmatization. Interestingly, levels of perceived stigmatization were low and this is an encouraging result. Moreover, the distribution of perceived stigma appeared to slightly deviate from normality (kurtosis = 1.57 and skewness = 1.42). Thus, before proceeding, perceived stigma scores were log-transformed to correct the normality concerns (kurtosis = 0.65 and skewness = -0.63).

We also checked for differences in mean scores between a) participants who worked or were working in COVID wards and those who do not, and b) genders. Results revealed differences neither between wards nor between genders (all ps > 0.18) and so these two variables will be not taken further into account in the following analysis.

Hypothesis testing

Hypotheses were tested with a structural equation modeling approach in which compassion satisfaction, burnout, and secondary traumatic stress were considered as outcomes. Perceived stigma and professional identification were grand-mean centered and then entered, along with their interaction, in the model as predictors. Self-esteem (uncentered) was also added to the model as a covariate to control for its potential effect and thus estimate the effects of professional identification and perceived stigma net of HCWs' self-esteem Model was estimated with maximum likelihood with lavaan package (37) in R (38).

As expected, the Results indicated that perceived stigmatization was negatively linked to compassion satisfaction (b = -0.257, SE = 0.092, p = 0.005) and positively linked with both burnout (b = 0.231, SE = 0.086, p = 0.007) and secondary traumatic stress (b = 0.355, SE = 0.102, p = 0.001). Professional identification was positively linked with compassion satisfaction (0.336, SE = 0.037, p < 0.001) and negatively associated with burnout (b = -0.249, SE = 0.035, p < 0.001) but, contrary to expectations, it was not associated with secondary traumatic stress (b = -0.031, SE = 0.041, p = 0.455). As expected, a significant interaction between perceived stigma and professional identification emerged on both compassion satisfaction (b = 0.179, SE = 0.077, p = 0.020) and secondary traumatic stress (b = 0.189, SE = 0.085, p = 0.026). Simple slope analysis (Fig. 1) revealed that perceived stigma was associated with reduced compassion satisfaction when

Table 1. Zero-order correlations and descriptive statistics of the considered variables

		1	2	3	4	5	6
1.Perceived Stigma (log)		–	-0.21**	-0.33**	-0.35**	0.35**	0.33**
2.Professional identification			–	0.25**	0.61**	-0.54**	-0.19**
3.Self-esteem				–	0.36**	-0.51**	-0.46**
4.CS					–	-0.75**	-0.30**
5.BO						–	0.63**
6.STS							–
	M	1.94	4.88	5.52	3.79	2.56	2.37
	SD	1.04	1.11	1.02	0.71	0.66	0.68

** p ≤ 0.01. CS = compassion satisfaction, BO = burnout, STS = secondary traumatic stress
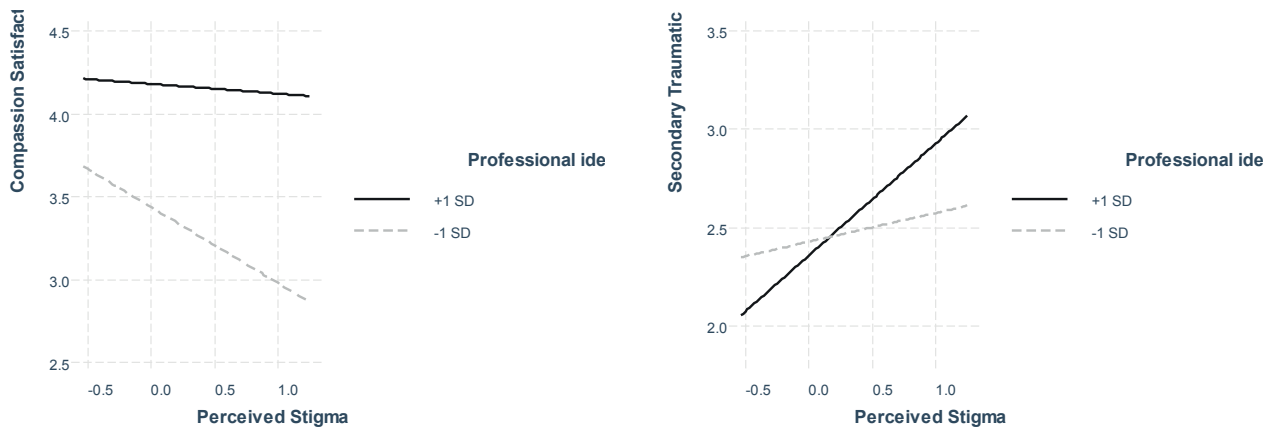N = 174.

Figure 1. Association between perceived stigma and compassion satisfaction (a) and perceived stigma and secondary traumatic stress (b) according to the level of professional identification

professional identification was low (b = -0.455, SE = 0.118, p < 0.001) but not when professional identification was high (b = -0.058, SE = 0.132, p = 0.661). On the contrary, perceived stigma was related to secondary traumatic stress when professional identification was *high* (b = 0.564, SE = 0.146, p < 0.001) but not when professional identification was low (b = 0.145, SE = 0.131, p = 0.268). Contrary to expectations, no significant interaction between professional identification and perceived stigma appeared on burnout (b = 0.006, SE = 0.072, p = 0.932). Finally, self-esteem was positively linked with compassion satisfaction (b = 0.117, SE = 0.042, p = 0.006) and negatively linked with both burnout (b = -0.220, SE = 0.039, p < 0.001) and secondary traumatic stress (b = -0.238, SE = 0.047, p < 0.001).

Further analysis

Previous analysis revealed that the zero-order significant effect of professional identification on secondary traumatic stress disappeared when other variables were taken into account. This suggests that the effect of professional identification on secondary traumatic stress could be mediated to some extent and we suspected that this mediation could occur via self-esteem. This is because social identification is expected to contribute, positively or negatively, to self-esteem and then it is expected that its effect on people's wellbeing

will pass via self-esteem (15,22,39). Thus, with an explorative intent, we tested a mediation model in which the effects of professional identification on dimensions of professional quality of life were mediated by self-esteem. Results (see Table 2) confirmed that self-esteem mediated the effect of professional identification on compassion satisfaction (b = 0.042, SE = 0.017, p = 0.012), burnout (b = -0.069, SE = 0.023, p = 0.003) and secondary traumatic stress (b = -0.078, SE = 0.026, p = 0.003). However, while mediation on burnout and compassion satisfaction was partial, the mediation on secondary traumatic stress was complete.

Conclusions

This work aimed to investigate the relationship between COVID-related stigmatization and the quality of professional life of a sample of HCWs. On the whole, results indicate that HCWs reported low levels of perceived stigmatization. This is an encouraging result suggesting that stigmatization against health professions could have fallen in the months after the first and the second wave of the pandemic. However, results also suggest that stigmatization might have a potentially detrimental impact on the quality of professional life of HCWs. Indeed, perceived stigmatization was negatively related to satisfaction with taking care of others, and positively related to both burn-

Table 2. Results of the mediation analysis model

Outcome	Predictor	b	SE	p	ß
CS					
	Professional identification	0.352	0.038	< 0.001	0.551
	Self-esteem	0.157	0.041	< 0.001	0.226
BO					
	Professional identification	-0.263	0.035	< 0.001	-0.441
	Self-esteem	-0.256	0.038	< 0.001	-0.396
STS					
	Professional identification	-0.050	0.042	0.235	-0.082
	Self-esteem	-0.291	0.046	< 0.001	-0.439
Professional identification					
	Self-esteem	0.268	0.080	0.001	0.248
Indirect effects					
	Prof.Ident->Self-esteem->CS	0.042	0.017	0.012	0.056
	Prof.Ident->Self-esteem->BO	-0.069	0.023	0.003	-0.098
	Prof.Ident->Self-esteem->STS	-0.078	0.026	0.003	-0.109

Note: CS = compassion satisfaction, BO = burnout, STS = secondary traumatic stress

out and secondary traumatic stress. In other words, HCWs who reported they had been stigmatized were more likely to display burnout and secondary trauma symptoms and less likely to be satisfied with their job as caregivers. Results on the effects of professional identification confirmed that professional identification might be a resource for HWCs' well-being as it was negatively related to burnout and positively related to compassion satisfaction. Thus, strongly identified professionals were less likely to report burnout symptoms and more likely to report satisfaction with their professional activity. Furthermore, professional identification was negatively correlated with secondary traumatic stress but this association was lost when self-esteem was added to the equation. Mediation analysis revealed that the effect of professional identification on the dimension of professional quality of life was mediated (partially or completely) by self-esteem supporting the idea that professional identity contributes to sustaining and enhancing HCWs' self-worth which, in turn, has a beneficial effect on wellbeing (15,39). However, we acknowledge the explorative aim of mediation analysis and so we would like to highlight that these results should be taken as circumstantial.

Moderation analysis helps to better specify the role of professional identification. Indeed, professional identification appeared to protect professionals from the negative effect of perceived stigmatization on compassion satisfaction: stigma reduced compassion satisfaction only when professional identification was low. Hence, professional identification may help professionals in managing and coping with the negative burden of being the target of stigma, and consequently maintaining high levels of satisfaction when taking care of suffering people. Contrary to our expectations, this "positive" effect was reversed when vicarious trauma was considered. In this case, the negative effect of perceived stigmatization was enhanced by professional identification so that strongly identified professionals were those who manifested a higher association between stigma and increased secondary traumatic stress. This suggests that the negative evaluation of the professional group would impact the ability to manage traumatic stress especially when people feel a strong link between the self and the ingroup. This result is understandable by thinking of the notion that social identity plays a central role in people's self-definition (14,16). Thus, people who strongly identify with their profession and are more tied with their professional activity could experience episodes of professional group devaluation as being more traumatic than weakly identified professionals (27,39).

Finally, although professional identity had a protective effect on burnout, it did not moderate the relationship between stigmatization and burnout suggesting that stigmatization increases the risk of burnout regardless of the HCWs' levels of professional identification. Thus, while professional identification was confirmed to be a protective factor for burnout (25,40), it does not seem to mitigate the detrimental effect of stigmatization on prolonged exposure to stressful events. Perhaps the prolonged nature of the distress that results in burnout could explain why professional identification does not mitigate the relationship between stigmatization and burnout. It is possible that stigmatization contributed to increasing burnout in HCWs who were close to developing, or had already been affected by, burnout symptoms, regardless of whether they were strongly or weakly identified with their profession.

Practical implications

From a practical point of view, these results highlight the potentially detrimental role of stigmatization on the quality of professional life of HCWs as well as the centrality of the collective dimension of being professionals for their wellbeing. Our findings seem to suggest that healthcare organizations should be mindful of, and promote, the feeling of professional belonging among workers as this helps professionals to be better equipped to manage stressful situations both inside and outside the workplace. Strongly identified professionals reported a higher level of self-esteem and compassion satisfaction, lower levels of burnout, and lower levels (via the mediation of self-esteem) of secondary traumatic stress. Highly identified professionals also appeared to be less likely to be dissatisfied when facing stigmatization. However, healthcare organizations should also be aware that stronger professional identification might expose professionals to increased suffering when negative outcomes occur to their (usually highly evaluated) professional group. This awareness should be followed by the acknowledgment of the specific characteristic of stigmatization, that is to say, that it is not addressed to the individual but to the individuals *as members of* a social category. Thus, also negative outcomes such as stigmatization and sec-

ondary traumatic stress should be managed as a group problem, rather than as an individual problem (26), by favoring a sense of connectedness, mutual recognition as well as intra- and inter-professional support (15,39). Social identity and professional identification can supply professionals with strong psycho-social equipment to cope efficiently with stress, workload, and emotional burden (29,41); this, however, should be supported, reinforced, and renewed by the healthcare organization and/or human resources department to avoid that the feeling being members of the same professional group could turn into a feeling of sinking together.

Limits

This research has several limitations that should be acknowledged. Firstly, the correlational nature of the research, as well as the self-report measures, prevent us from inferring a causal relationship between observed variables and imply common method bias which could have inflated results (42). Another limitation relies on the relatively small sample size which could reduce the generalizability of present results. Moreover, given that our sample mostly consisted of nurses, it is unclear whether these results could be easily generalized to other professional categories (e.g., physicians).

Concluding remark

HCWs have been and are called upon to make an enormous effort to face health problems such as the COVID-19 pandemic. Uncertainties, threats, and fears in the population have exposed HCWs to the threat of being avoided, attacked, and even blamed for the spread of contagion. This stigmatization affects the wellbeing of professionals as well as their quality of professional life and perhaps their performance. Contrasting and preventing stigmatization should be a primary interest of healthcare organizations and public health policies to improve and protect the health of professionals (at all levels, including the psychological and psychosocial levels): developing a strong and secure professional identity would contribute to enhancing the wellbeing and resilience of HCWs in a wide range of difficulties.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement, etc.) that might pose a conflict of interest in connection with the submitted article

References

1. Devakumar D, Shannon G, Bhopal SS, Abubakar I. Racism and discrimination in COVID-19 responses. Lancet 2020;395(10231):1194. doi:10.1016/S0140-6736(20)30792-3

2. He J, He L, Zhou W, Nie X, He M. Discrimination and social exclusion in the outbreak of COVID-19. Int J Environ Res Public Health 2020;17(8). doi:10.3390/ijerph17082933

3. Bagcchi S. Stigma during the COVID-19 pandemic. Lancet Infect Dis 2020;20(7):782. doi:10.1016/S1473-3099(20)30498-9

4. Bhanot D, Singh T, Verma SK, Sharad S. Stigma and Discrimination During COVID-19 Pandemic. Front Public Heal 2021;8. doi:10.3389/fpubh.2020.577018

5. Devi S. COVID-19 exacerbates violence against health workers. Lancet (London, England) 2020;396(10252):658. doi:10.1016/S0140-6736(20)31858-4

6. Taylor S, Landry CA, Rachor GS, Paluszek MM, Asmundson GJG. Fear and avoidance of healthcare workers: An important, under-recognized form of stigmatization during the COVID-19 pandemic. J Anxiety Disord 2020;75. doi:10.1016/j.janxdis.2020.102289

7. Dye TD, Alcantara L, Siddiqi S, et al. Risk of COVID-19-related bullying, harassment and stigma among healthcare workers: An analytical cross-sectional global study. BMJ Open 2020;10(12). doi:10.1136/bmjopen-2020-046620

8. Ransing R, Ramalho R, de Filippis R, et al. Infectious disease outbreak related stigma and discrimination during the COVID-19 pandemic: Drivers, facilitators, manifestations, and outcomes across the world. Brain Behav Immun 2020;89:555-558. doi:10.1016/j.bbi.2020.07.033

9. Teksin G, Uluyol OB, Onur OS, Teksin MG, Ozdemir HM. Stigma-related factors and their effects on health-care workers during COVID-19 pandemics in Turkey: a multicenter study. SiSli Etfal Hastan Tip Bul / Med Bull Sisli Hosp 2020;54(3):281-290. doi:10.14744/semb.2020.02800

10. Ramaci T, Barattucci M, Ledda C, Rapisarda V. Social stigma during COVID-19 and its impact on HCWs outcomes. Sustain 2020;12(9). doi:10.3390/su12093834

11. Haslam SA, Ellemers N. Identity Processes in Organizations. In: Handbook of Identity Theory and Research. Springer New York 2011;715-744. doi:10.1007/978-1-4419-7988-9_30

12. Ashforth BE, Mael F. Social Identity Theory and the Organization. Acad Manag Rev 1989;14(1):20-39. doi:10.5465/amr.1989.4278999

13. Tajfel H, Turner J. An integrative theory of inter-group conflict. In: Austin G, Worchel S, eds. The Social Psychology of

Intergroup Relations. Brooks/Cole 1979;33-47.

14. Turner JC, Hogg MA, Oakes PJ, Reicher SD, Wetherell MS. Rediscovering the Social Group: A Self Categorization Theory. Oxford: Blackwell; 1987.

15. Haslam C, Jetten J, Cruwys T, Dingle GA, Haslam SA. The New Psychology of Health: Unlocking the Social Cure. Routledge 2018; doi:10.4324/9781315648569

16. Haslam SA, McMahon C, Cruwys T, Haslam C, Jetten J, Steffens NK. Social cure, what social cure? The propensity to underestimate the importance of social factors for health. Soc Sci Med 2018;198:14-21. doi:10.1016/j.socscimed.2017.12.020

17. Nie S, Sun C, Wang L, Wang X. The Professional Identity of Nursing Students and Their Intention to Leave the Nursing Profession During the Coronavirus Disease (COVID-19) Pandemic. J Nurs Res. Published online 2021; doi:10.1097/jnr.0000000000000424

18. Elias RZ. The impact of professional commitment and anticipatory socialization on accounting students' ethical orientation. J Bus Ethics 2006;68(1):83-90. doi:10.1007/s10551-006-9041-5

19. Caricati L, La Sala R, Marletta G, et al. Work climate, work values and professional commitment as predictors of job satisfaction in nurses. J Nurs Manag 2014;22(8):984-994. doi:10.1111/jonm.12079

20. Lu H, While AE, Barriball KL. Job satisfaction and its related factors: A questionnaire survey of hospital nurses in Mainland China. Int J Nurs Stud 2007;44(4):574-588. doi:10.1016/j.ijnurstu.2006.07.007

21. Cruwys T, South EI, Greenaway KH, Haslam SA. Social Identity Reduces Depression by Fostering Positive Attributions. Soc Psychol Personal Sci 2015;6(1):65-74. doi:10.1177/1948550614543309

22. DeMarco TC, Newheiser AK. When groups do not cure: Group esteem moderates the social cure effect. Eur J Soc Psychol 2019;49(7):1421-1438. doi:10.1002/ejsp.2594

23. Jetten J, Haslam C, Haslam SA, Dingle G, Jones JM. How groups affect our health and well-being: The path from theory to policy. Soc Issues Policy Rev 2014;8(1):103-130. doi:10.1111/sipr.12003

24. Leach CW, Mosquera PMR, Vliek MLW, Hirt E. Group Devaluation and Group Identification. J Soc Issues 2010;66(3):535-552. doi:10.1111/j.1540-4560.2010.01661.x

25. Avanzi L, Schuh SC, Fraccaroli F, van Dick R. Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy. Work Stress. Published online 2015; doi:10.1080/02678373.2015.1004225

26. Caricati L, Panari C, Melleri M. Group identification and self-efficacy associated with quality of life in emergency medical services volunteers: A cross-sectional investigation. J Appl Soc Psychol 2020;50(8):476-488. doi:10.1111/jasp.12675

27. Major B, Schmader T. Stigma, Social Identity Threat, and Health. In: Major B, Dovidio JF, Link BG, eds. The Oxford

Handbook of Stigma, Discrimination, and Health. Oxford University Press 2018;85–103.

28. Eliezer D, Major B, Mendes WB. The costs of caring: Gender identification increases threat following exposure to sexism. J Exp Soc Psychol. Published online 2010; doi:10.1016/j.jesp.2009.09.015

29. Haslam SA, O'Brien A, Jetten J, Vormedal K, Penna S. Taking the strain: Social identity, social support, and the experience of stress. Br J Soc Psychol 2005;44(3):355-370. doi:10.1348/014466605X37468

30. European Union. Regulation 2016/679 of the European parliament and the Council of the European Union. Off J Eur Communities. Published online 2016.

31. Stamm BH. The Concise ProQOL Manual (Second Edition).; 2010. http://www.proqol.or

32. Shoji K, Cieslak R, Smoktunowicz E, Rogala A, Benight CC, Luszczynska A. Associations between job burnout and self-efficacy: A meta-analysis. Anxiety, Stress Coping. 2016;29(4):367-386. doi:10.1080/10615806.2015.1058369

33. Stamm BH. Measuring compassion satisfaction as well as fatigue: Developmental history of the Compassion Satisfaction and Fatigue Test. In: Figley CR, ed. Treating Compassion Fatigue. Psychosocial Stress Series, No. 24. Brunner-Routledge 2002; 107-119.

34. Mostafa A, Sabry W, Mostafa NS. COVID-19-related stigmatization among a sample of Egyptian healthcare workers. PLoS One 2020;15(12 December). doi:10.1371/journal.pone.0244172

35. Prati G, Catufi V, Pietrantoni L. Una verifica del modello dello stress basato sull'identificazione e categorizzazione sociale nei soccorritori. A test of the social identity/self- categorization model of stress among rescue workers. G Ital di Psicol dell'Orientamento 2014;(14):59-71.

36. Rosenberg M. Society and the Adolescent Self-Image. Princeton University Press 1965;

37. Rosseel Y. Lavaan: An R package for structural equation modeling. J Stat Softw 2012;48. doi:10.18637/jss.v048.i02

38. Computing. RF for S. R Core Team 2020. R: A language and environment for statistical computing. R Foundation for Statistical Computing.

39. Häusser JA, Junker NM, van Dick R. The how and the when of the social cure: A conceptual model of group- and individual-level mechanisms linking social identity to health and well-being. Eur J Soc Psychol. 2020;50(4):721-732. doi:10.1002/ejsp.2668

40. Sangal RB, Wrzesniewski A, Dibenigno J, et al. Work team identification associated with less stress and burnout among front-line emergency department staff amid the COVID-19 pandemic. BMJ Lead 2020;0:1-4. doi:10.1136/leader-2020-000331

41. Jetten J, Haslam SA, Cruwys T, Greenaway KH, Haslam C, Steffens NK. Advancing the social identity approach to health and well-being: Progressing the social cure research agenda. Eur J Soc Psychol 2017;47(7):789-802. doi:10.1002/ejsp.2333

42. Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common method biases in behavioral research: a critical review of the literature and recommended remedies. J Appl Psychol 2003;88(5):879-903. doi:10.1037/0021-9010.88.5.879

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