Affective, Cognitive, and Behavioral Mental Illness Stigma in Healthcare: A Comparison between General Ward Nurses and the General Population

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Accepted Version

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Open Data

Material and data are available at https://osf.io/xnvme/?view_only=1692731e30284a0dbcde8ab2c120e373

Declarations of Interest

None.

Abstract

Stigma from health professionals and the general population can be a barrier in healthcare for people with mental illness. Aim of this study was to compare experiences with and perceptions of people with mental illness between general ward nurses and the general population in the UK as well as the associated mechanisms. Participants were general ward nurses (n = 101) and the general population (n = 116) in the UK who completed a survey for this cross-sectional study. Nurses reported poorer contact experiences with people with mental illness (less positive contact, more negative contact, lower contact quality) than the general population. They also reported greater stigma (more negative attitudes, higher attribution of negative and lower attribution of positive human uniqueness traits to people with mental illness, greater differences between themselves and people with mental illness, lower behavioral intentions). Intergroup anxiety and intergroup empathy mediated the associations between group and contact quality, attitudes, and behavioral intentions. Understanding differences in stigma between health professionals and the general population will be important to support people with mental illness in seeking treatment and receiving optimal physical and mental healthcare, as well as to support health professionals in their roles.

Keywords: mental health stigma; nurses; intergroup contact; empathy

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Mental illness is prevalent worldwide, the Global Burden of Disease Study 2017 estimated that 15% of the global population are affected by mental health and substance use disorders (Dattani et al., 2018; James et al., 2018). For every leading cause of death, people with serious mental illness die 13-30 years earlier, median: 10 years (Piatt et al., 2010). People with serious mental illness have an increased risk of numerous health conditions such as cardiovascular disease, respiratory diseases, diabetes or infections that could be preventable through preventative medical checks and a reduction of unhealthy behaviors (e.g., smoking, poor diet, inactivity), disadvantaged groups are particularly affected (De Hert et al., 2011; Major et al., 2013; Walker et al., 2015). However, due to the stigma associated with mental illness, accessing healthcare can be challenging, and the quality of healthcare received can be lower (Corrigan et al., 2014; De Hert et al., 2011; Huggett et al., 2018). Challenging mental health stigma is one way of the ways the World Health Organization proposes to reduce the risk factors of chronic illness, enhance the life expectancy and improve the mental health of people with mental illness (Vreeland, 2007; World Health Organization, 2013).

Research on examining differences in public and professional attitudes towards people with mental illness is scarce. Our research is extending previous research in three ways: (1) While previous research has focused on comparing mental health nurses to the general population, we compared general ward nurses. (2) We include advanced stigma measures in terms of affect (intergroup anxiety, empathy, attitudes), cognition (attribution of intergroup differences and humanness) and behavioral intentions as well as advanced contact measures (frequency of positive and negative, quality). (3) We provide insight into the

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affective processes why health professionals may endorse greater stigma and have poorer contact quality (i.e., lower empathy, higher intergroup anxiety).

Mental Health Stigma: Barriers to Healthcare

Stigma poses barriers to healthcare (Corrigan, Druss, et al., 2014; Corrigan, Mittal, et al., 2014). At the person-level, anxiety related to disclosure of a mental illness diagnosis and internalized stigma related to labels of diagnoses can prevent help-seeking and adherence to treatment (Birtel et al., 2017; Clement et al., 2015; Corrigan, Dinos et al., 2004, Druss, et al., 2014; Hansson et al., 2013; Huggett et al., 2018; Rüsch et al., 2005). Delays to treatment detrimentally affect the severity of symptoms (Schultz et al., 2007). At the provider-level, stigma can lead to healthcare decisions against the typical healthcare standards, for example failure to screen for conditions that are of higher risk in people with mental illness (De Hert et al., 2011) and to treat the physical health adequately (diagnostic overshadowing; Gras et al., 2015). The belief that a patient will not adhere to treatment (Corrigan, Mittal, et al., 2014) means they are less likely to be referred for specialist treatment by a primary care provider, such as mammography or cardiac catheterization. A review of 18 qualitative studies (Mestagh & Hansen, 2014) found that outpatients with schizophrenia who received community mental healthcare encounter stigma from healthcare professionals, and that relational aspects (e.g., social exclusion) and behavioral aspects (e.g., social withdrawal) of stigma further impacted their life.

Research indicates that mental health professionals may hold greater stigma than the general population. For example, Caldwell and Jorm (2001) and Hugo (2001) found that mental health nurses displayed greater pessimism about prognosis and long-term outcomes after treatment for people with schizophrenia than the general population in Australia. Lauber et al. (2006) and Nordt et al. (2006) found that mental health nurses endorsed greater negative stereotypes towards people with mental illness than the general population in Switzerland.

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Health professionals differ in the stigma towards people with mental illness. Primary care physicians and nurses (Mittal et al., 2016; Smith et al., 2017) as well as psychiatrists (Lauber et al., 2006; Nordt et al., 2006) report more negative attitudes, while mental health nurses (Caldwell & Jorm, 2001; Lauber et al., 2006) and psychologists (Lauber et al., 2006; Mittal et al., 2016; Nordt et al., 2006) report more positive attitudes. General ward nurses were not included as participants in these studies.

An integrative literature review of psychiatric nurses and non-psychiatric nurses' attitudes towards mental illness in 14 cross-sectional studies between 1995 and 2015 across 20 countries in Europe, Asia, and the Middle East (de Jacq et al., 2016) found that nurses' attitudes were mixed and comparable to those of the general population. When considering non-psychiatric nurses only, studies find negative attitudes (Arvaniti et al., 2009; Aydin et al., 2003) and some find positive attitudes, although less positive compared to other mental health professionals (Scheerder et al., 2011). None of the studies with non-psychiatric nurses were carried out in the UK.

Research on examining differences in public and professional attitudes towards people with mental illness in the UK is scarce (Schafer et al., 2011). Nurses represent a significant force within the society that can advocate for people with mental illness, encourage their participation in healthcare and reject stigmatization (Bates & Stickley, 2013).

Relationship between Nurses and Patients

Several factors may explain the differences in stigma in healthcare professionals such as type of healthcare position and training and contact quality (Mårtensson et al., 2014: Smith et al., 2017). Having a higher education is associated with lower mental health stigma such as segregating behavior (Buizza et al., 2017). Nurses also receive specific mental health education, which is also associated with lower stigma (İnan et al., 2019; Ewalds-Kvist et al., 2013). However, although mental health professionals score significantly higher for

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knowledge of mental illness, professional training may not lead to behavioral changes (Nordt et al., 2006; Rüsch et al., 2005). Ascribing biological causes rather than psychosocial factors to mental disorders was associated with a greater desire for social distance (Dietrich et al., 2004) and lower empathy in clinicians (Lebowitz & Ahn, 2014).

As general ward nurses more frequently interact with patients with mental illness, intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2006) suggests that nurses may have less stigmatizing attitudes toward mental illness than the public (Carrara et al., 2021; Mårtensson et al., 2014). However, healthcare professionals are often rated as one of the most stigmatizing groups users of mental health services they encounter (Thornicroft et al., 2007). Contact in clinical settings is potentially not effective in reducing stigma in healthcare workers because Allport's optimal conditions (friendship potential, equal status, cooperation towards common goal, institutional support) are not met. Additionally, contact may be negative and the contact quality lower, which has a stronger effect on increased prejudice than positive contact has on reduced prejudice (Barlow et al., 2012; Graf et al., 2014). For example, half of inpatient staff that treat co-occurring mental illness and substance abuse experience violence and aggressive behavior from patients (Howard & Holmshaw, 2010). Staff who worked with patients with psychosis or in inpatient settings had more negative attitudes towards mental illness than staff in outpatient settings (Hansson et al., 2013). Those who have been practicing the longest were more likely to hold pessimistic beliefs about recovery from mental illness (Corrigan, Mittal, et al., 2014).

The Present Research

Our aim was to examine whether adult ward nurses differ in their stigmatizing experiences with (contact) and perceptions of (stigma) people with mental illness compared to members of the general population in the UK.

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Contact. Contact experiences with people with mental illness were captured through the frequency and valence of contact, in line with the intergroup relations literature (Barlow et al., 2012; Graf et al., 2014; Pettigrew & Tropp, 2006), on five measures: the frequency of everyday contact, the quality of contact, the frequency of positive and of negative contact, and the number of friendships.

Stigma. Stigma can be conceptualized as having three dimensions that encompass negative affect, cognitive beliefs, and intentions and behavior (see also Ahmed et al., 2020; Corrigan & Watson, 2002; Thornicroft et al., 2007; Zanna & Rempel, 1988). Using these dimensions, in our study, stigma was captured on six dependent measures: It was measured in form of *emotions* (intergroup anxiety, empathy, attitudes), *cognitions* (perceived intergroup differences, attribution of positive and negative humanness traits), and *behavioral intentions*, using established measures from the intergroup relations literature.

In terms of *emotions*, intergroup anxiety is the anxiety individuals experience when anticipating negative or difficult interactions with stigmatized group members, such as anxiety of being rejected or appearing prejudiced. When intergroup anxiety is reduced, stigma is also reduced (Stephan & Stephan, 1985; Swart et al., 2011; Turner et al., 2007). Intergroup empathy is the ability to experience affective reactions to an outgroup member's experience. When intergroup empathy is enhanced, stigma is reduced (Swart et al., 2011; Turner et al., 2013). Attitudes were measured capturing feelings towards the stigmatized group, commonly used to measure outgroup prejudice (Wright et al., 1997).

In terms of *cognitions*, one form of stigma is dehumanization, i.e., the tendency to see oneself as more human than stigmatized groups (Haslam, 2006). Dehumanization has been conceptualized on two dimensions: Human Uniqueness refers to attributes (positive and negative) that are unique to humans and distinguish humans from animals. Human Nature refers to attributes that are essential to being human and distinguish humans from objects.

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Furthermore, we measured perceived intergroup differences, as stigma is linked with greater perceived differences between one's ingroup and the stigmatized outgroup (Paolini et al., 2010).

In terms of *behavioral intentions*, we measured intentions to engage in future contact, which have been shown to be a more proximal predictor of behavior than attitudes in various domains (Ajzen, 1991; Godin & Kok, 1996). Individuals tend to avoid stigmatized group members due to intergroup anxiety or prior negative experiences (Stephan & Stephan, 1985).

Mediation. Intergroup anxiety and intergroup empathy have been shown to play a key mediating role between intergroup experiences and stigma reduction (Pettigrew & Tropp, 2008), over-shadowing the effect of knowledge. In line with these findings, we tested intergroup anxiety and intergroup empathy as mediators between group and attitudes as well as behavioral intentions. Furthermore, we tested whether they also mediate effects on contact as an outcome variable. Intergroup emotions (e.g., anxiety, empathy) not only reduce stigma (e.g., in form of attitudes) and facilitate whether individuals are willing to seek future contact (Kauff et al., 2021), lower anxiety and greater empathy should also predict a greater quality of contact. We tested the following hypotheses:

Hypothesis 1*:* Nurses report more frequent contact but less positive contact than the general population, i.e., higher contact quantity, lower contact quality, more frequent negative and less frequent positive contact, and fewer friendships.

Hypothesis 2*:* Nurses report greater stigma than the general population, i.e., greater intergroup anxiety, lower empathy, less positive attitudes, lower contact intentions, greater intergroup differences, and higher attribution of negative and lower attribution of positive human uniqueness and human nature traits.

Hypothesis 3*:* Intergroup anxiety and empathy mediate the relationships between group (nurses vs general population) and contact quality, attitudes, and intentions.

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Method

Participants

An a priori power analysis using GPower (Faul et al., 2007) with an alpha of .05, a medium effect size of Cohen's $f^2 = .0625$ and a power of .80 for a MANOVA with two groups and five dependent measures yielded an overall sample size of $N = 212$. Using the Monte Carlo Power Analysis for Indirect Effects tool (Schoenemann et al., 2017), the sample size required for a parallel mediation analysis to detect moderate to large correlations (.40) between the X, M1, M2 and Y variables, with a power of .80 for both indirect effects a1b1 and a2b2 (number of replications = 5000), was $N = 160$.

Participants were 101 adult general ward nurses (77 female and 24 male) and 116 members of the general population (92 female, 23 male and one non-binary gendered) in the UK ($N_{total} = 217$). Nurse participants had a mean age of 34.72 years ($SD_{nurses} = 8.63$), participants of the general public had a mean age of 42.24 years ($SD_{public} = 12.89$). Participant demographics can be found in Table 1. Participants from the general population indicated a variety of occupations, none of them were nurses.

Procedure

Nurses were recruited from one hospital's medical wards by the researcher, who visited these wards for this purpose. All available nurses on eight medical wards were invited to take part. Nurses who were busy with patients or other responsibilities at the time of the visit were not approached by the researcher. Nurses were required to be adult nurses registered with the Nursing and Midwifery Council (mental health nurses, unregistered healthcare staff and student nurses were not included in this study) and were employed by either the NHS or by private healthcare agencies. The researcher provided the nurses with a tablet or smartphone with a link to the online survey on Qualtrics, so that the survey could be completed immediately on the ward. The general population sample was recruited by using

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snowball sampling. Members of the general public completed an online questionnaire via a link shared on social media platforms, on their own electronic devices, and at a time and location of their choosing. Members of the general public were not approached by the researcher in person. All participants have provided their permission for their information to be used in the study. The Psychology and Counselling Departmental Research Ethics Panel at the University of [blinded for peer review] approved the study (ref: FRECADD001309).

Material

All measures were assessed on 7-point scales (anchors reported below). The mean of the items formed scales that were reliable as indicated by McDonald's omega (ω). Higher scores indicate higher levels of the measured concepts (after recoding where appropriate). Additionally, participants were asked to complete a demographics questionnaire.

Contact.

Contact quantity. Participants indicated the frequency of everyday contact with people with mental health problems on three items (Voci & Hewstone, 2003), e.g., "talk to", 1 = *never* to 7 = *very often*; ω_{nurses} = .93, ω_{public} = .97.

Contact quality. Participants reported the quality of their contact on six items (Islam & Hewstone, 1993), e.g., how *superficial-deep, unpleasant-pleasant, competitive-cooperative* they characterize their contact with people with mental health problems on a semantic differential, 1 indicated the lower and 7 the higher quality pole; ω_{nurses} = .65, ω_{public}= .75.

Contact valence. The frequency of positive and negative contact with people with mental health problems was measured by one item each: "On average, how often do you have positive [negative] contact with people with mental health problems?", 1 = *never* and 7 = *very often* (Paolini et al., 2010).

Intergroup friendships. Participants were asked to indicate how many of their friends are people with mental health problems (1 = *none* and 7 = *a lot*).

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Affective stigma.

Intergroup anxiety. Participants reported their level of intergroup anxiety on ten items (Stephan & Stephan, 1985). Common stem: "If you were interacting with a person with a mental health problem, to what extent would you feel", item-specific completion e.g., "awkward", "irritated", "defensive"; 1 = *never* to 7 = *very often*; ω_{nurses} = .80, ω_{public} = .82.

Intergroup empathy. Participants reported their level of empathy on three items (Swart et al., 2011), e.g., "If I heard that a person with a mental health problem was upset, and suffering in some way, I would also feel upset", 1 = *strongly disagree* to 7 = *strongly agree*; ω_{nurses} = .74, ω_{public} = .87.

Outgroup attitudes. Participants reported their intergroup attitudes on six items (Wright et al., 1997), e.g., how *cold-warm, positive-negative, friendly-hostile* they feel about people with mental health problems in general on a semantic differential, 1 indicated the negative and 7 the positive pole; ω_{nurses} = .81, ω_{public} = .92.

Cognitive stigma.

Perceived intergroup differences. Participants were asked to indicate how different they think they are from people with mental health problems (1 = *none* and 7 = *a lot*, Paolini et al., 2010).

Trait attributions. Participants were asked to describe how well 20 traits describe people with mental health problems (Bastian & Haslam, 2010). These traits were either positive and high in desirability or negative and low in desirability: positive Human Uniqueness traits (e.g., conscientious; ω_{nurses} = .83, ω_{public} = .92), negative Human Uniqueness traits (e.g., disorganized; ω_{nurses} = .82, ω_{public} = .89), positive Human Nature traits (e.g., curious; ω_{nurses} = .83, ω_{public} = .91) and negative Human Nature traits (e.g., impatient; ω_{nurses} = .72, ω_{public} = .81); 1 = *not at all* and 7 = *very much so*.

Behavioral stigma.

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Behavioral intentions. Participants reported their behavioral intentions using nine items from the Fear and Behavioural Intentions (FABI) questionnaire (Wolff et al., 1996), e.g., "Would you object to having mentally ill people living in your neighbourhood?", 1 = *very unlikely* to 7 = *very likely*; $\omega_{nurses} = .81$, $\omega_{public} = .90$.

Results

Zero-order correlations between all measures are reported in Table 2. Greater contact quality was associated with lower intergroup anxiety and higher empathy, more positive attitudes and greater behavioral intentions, lower perceived intergroup differences, higher attributions of positive and lower attributions of negative human uniqueness traits, for both nurses and the general population.

Contact and Stigma

To test whether nurses and the general population differ in contact experiences with and stigma towards people with mental illness, two multivariate analyses of variance (MANOVA) were carried out for contact (quantity, quality, positive, negative, friendships) and stigma (intergroup anxiety, empathy, attitudes, intentions, intergroup differences) as the dependent variables separately. Group was entered as the independent variable and coded as nurses = 0 and general populations = 1. The results demonstrated a significant multivariate effect for contact (Pillai's Trace $V = .213$, $F(5, 211) = 11.41$, $p = < .001$, partial $\eta 2 = .21$), and stigma (Pillai's Trace $V = .120$, $F(5, 211) = 5.75$, $p = < .001$, partial $\eta 2 = .12$). Univariate results revealed significant effects for all contact and stigma dimensions (but not contact quantity), results can be found in Table 3. Nurses reported significantly lower contact quality, less frequent positive and more frequent negative contact, and fewer friendships, supporting H1. They also reported significantly higher intergroup anxiety, lower empathy, more negative attitudes, lower behavioral intentions, and greater differences to people with mental illness than the general population, supporting H2.

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Trait Attributions

To test whether nurses and the general population differ in their attribution of humanness to people with mental illness, two separate two-way mixed ANOVAs for Human Uniqueness and Human Nature, with group (nurses vs public) as between-participants factor and humanness valence (positive, negative) as within-participants factor.

For *Human Uniqueness*, there was a significant main effect of Valence, $F(1, 215) = 12.59$, $p < .001$, partial $\eta^2 = .06$. Independently of group, participants showed a higher attribution of positive ($M = 4.02$, $SD = 1.15$) than negative Human Uniqueness traits ($M = 3.56$, $SD = 1.18$) to people with mental illness. There was no main effect of Group, $F(1, 215) = 0.00$, $p = .960$, partial $\eta^2 = .00$. Valence and group significantly interacted, $F(1, 215) = 16.59$, $p < .001$, partial $\eta^2 = .07$. Simple effects analysis revealed that nurses showed a higher attribution of negative traits ($M = 3.82$, $SD = 1.13$) than the general population ($M = 3.33$, $SD = 1.19$), $t(215) = 3.08$, $p = .002$, $d = 0.42$, and a lower attribution of positive traits ($M = 3.76$, $SD = 0.99$) than the general population ($M = 4.25$, $SD = 1.23$), $t(215) = -3.25$, $p = .001$, $d = -0.44$, supporting H2. The general population also showed a higher attribution of positive ($M = 4.25$, $SD = 1.23$) than negative traits ($M = 3.33$, $SD = 1.19$), $t(115) = 5.25$, $p < .001$, $d = 0.49$.

For *Human Nature*, there were no significant main effects or interaction, ps > .05. Nurses and the general population did not differ in their attribution of positive and negative Human Nature traits to people with mental illness (nurses: $M_{positive} = 4.05$ ($SD = 1.00$), $M_{negative} = 4.31$ ($SD = 0.98$); public: $M_{positive} = 4.33$ ($SD = 1.13$), $M_{negative} = 4.29$ ($SD = 1.00$).

Mediation Models

We computed mediation analyses to assess whether intergroup anxiety and empathy mediated the relationship between group (independent variable) and contact quality, attitudes, and intentions (dependent variables). Analyses were carried out using the PROCESS macro

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for SPSS (Hayes, 2021, Model 4). The significance of the mediation was tested using the bootstrapping procedure with 5000 resamples. The results can be found in Table 4.

Contact Quality. Belonging to the group of nurses was significantly associated with higher intergroup anxiety (B = -0.44, SE = 0.13, $p < .001$) and lower empathy (B = 0.48, SE = 0.19, $p = .012$). In return, higher intergroup anxiety (B = -0.43, SE = 0.07, $p < .001$) and lower empathy (B = 0.12, SE = 0.05, $p = .018$) were significantly associated with lower contact quality. There were significant indirect effects through intergroup anxiety and empathy, and a significant total (but not direct) effect of group on contact quality.

Attitudes. Higher intergroup anxiety (B = -0.40, SE = 0.09, $p < .001$) and lower empathy (B = 0.16, SE = 0.06, $p = .007$) were significantly associated with more negative attitudes. There were significant indirect effects and a significant total (but not direct) effect of group on attitudes, through intergroup anxiety and empathy.

Behavioral Intentions. Higher intergroup anxiety (B = -0.42, SE = 0.07, $p < .001$) and lower empathy (B = 0.31, SE = 0.05, $p < .001$) were significantly associated with lower intentions. There were significant indirect effects and a significant total (but not direct) effect of group on intentions, through intergroup anxiety and empathy.

In sum, as hypothesized (H3), intergroup anxiety and empathy mediated the relationships between group and contact quality, attitudes, and intentions.

Discussion

Research on examining differences in public and professional attitudes towards people with mental illness is scarce, our study expands the previous literature by including general ward nurses in the UK. We discuss our results in terms of differences in frequency and valence of contact experiences as well as different dimensions of stigma in form of negative emotions, cognitions, and behavioral intentions.

Contact Experiences

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We found that nurses reported poorer contact experiences with people with mental illness than the general population. Specifically, they reported a lower frequency of positive and a higher frequency of negative contact, as well as a lower quality of contact overall than the general population (H1). This is in line with the literature which points towards different reasons why healthcare professionals may endorse greater stigma than the general population, as well so why there are differences between healthcare professionals in relation to stigma (Mårtensson et al., 2014; Smith et al., 2017). One of these reasons are differences in the quality of contact with people with mental illness. For example, although health professionals may have a higher quantity of contact with patients with mental illness, this quantity may be negative and the quality of contact poorer compared to the general population as in our study. Correlations in our sample also suggested that, in line with intergroup contact theory (Allport, 1957), greater contact quality was associated with more positive feelings, cognitions, and behavioral intentions towards people with mental illness, for both nurses and the general population. According to Allport's contact theory, contact would lead to stigma-reduction under optimal conditions: when there is potential for friendships, equal status between groups, when groups cooperate to achieve a common goal, and when the contact is supported by institutions. Contact in the clinical setting potentially does not meet these optimal conditions. However, meta-analyses have demonstrated that these four optimal conditions may not be essential, but rather facilitating (Pettigrew & Tropp, 2006).

Stigma

We found that nurses reported greater stigma towards people with mental illness than the general population on all dimensions. Specifically, they reported more negative *emotions*, i.e., less positive feelings and empathy, higher intergroup anxiety; more negative *cognitions*, i.e., higher attribution of negative and lower attribution of positive human uniqueness traits to people with mental illness, greater differences between themselves and people with mental

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illness; and lower *behavioral intentions* for contact (H2). These results are in line with previous findings that mental health professionals endorse greater stigma in form of stereotypes and greater pessimism about treatment outcomes, such as in Switzerland and Australia (Caldwell & Jorm, 2001; Hugo, 2001; Lauber et al., 2006; Nordt et al., 2006). These studies did not include general ward nurses and included limited stigma measures. Our study showed that also general ward nurses expressed greater stigma than the general population in the UK. Furthermore, we included advanced stigma measures, conceptualized in line with the multicomponent model of attitudes (Zanna & Rempel, 1988; see also Ahmed et al., 2020; Thornicroft et al., 2007), and showed that nurses expressed greater stigma on all three stigma dimensions of negative emotions, cognitions, and behavioral intentions. Furthermore, we provide insight into the processes why health professionals endorse greater stigma. Specifically, we found that higher intergroup anxiety and lower empathy with people with mental illness explained less positive attitudes, fewer intentions and lower quality of contact. In other words, intergroup anxiety and empathy mediated the associations between group and contact quality, attitudes, and intentions (H3).

Implications and Future Directions

Shared decision-making between the health professional and the patient is thought to increase treatment concordance for common mental health issues (NICE, 2011). This patient group, however, is more likely to be viewed as incompetent (El-Badri & Mellsop, 2007). Because care providers engage in these stigmatizing practices, collaborative care planning is rare in reality, and concordance remains an issue for certain people with mental illnesses. People with mental illness are kept in a subordinated position by stigmatizing views in the healthcare system. They are less likely to advocate for reforms that would benefit them as a result of internalizing this stigma, increasing health inequities between those with mental illness and those without (Yang et al., 2014).

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General ward nurses represent a significant force within society to combat stigma. Our aim was to better understand stigma within the healthcare system to inform education and stigma interventions to support patients who seek help and support nurses in their roles. As the nurses reported more negative experiences with people with mental illness than members of the general public, future research is warranted to identify the causes of negative contact and anxiety, for example staff-to-patient ratios as well as perceived support from mental health specialists on the ward, so solutions can be discussed. Furthermore, as contact with individuals who experience mental illness can reduce mental illness stigma, promoting positive and qualitatively high contact in nurses could be one of the ways mental illness stigma can be reduced. Future research should examine ways to promote high quality contact in nurses, and test whether such interventions reduce stigma compared to nurses who did not participate in the intervention.

Due to the snowball sampling, there was an unequal gender split in the general population. Although this mirrors the gender split in the nursing group, this may have implications for the generalizability of the findings. Among the non-medical staff in the National Health Service (NHS) such as nurses, 19.7% come from Asian, Black, Chinese, Mixed and Other ethnic backgrounds, in London even 40% (NHS WRES, 2021). Compared with the general population this is higher, according to the 2011 Census 14% of people in England and Wales origin from a Black, Asian and minority ethnic (BAME) background, in London even 30.3% (Office for National Statistics, 2011). This disparity between the ethnicity of the public and nurses was mirrored in our sample, 75.2% of nurses were from a BAME background and 9.5% of the general public were from a BAME background. Future research may wish to compare nurses of different ethnic backgrounds.

Conclusions

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Stigma towards people with mental illness is widespread and can be a barrier for accessing healthcare and receiving high quality treatment. This study revealed that general ward nurses report poorer contact experiences and endorse greater affective, cognitive, and behavioral stigma compared to the general population in the UK. Nurses represent a significant force within society to combat stigma. Therefore, it is important to understand differences in stigma between health professionals and the general population, and to identify ways to reduce stigma for example through education, training, and interventions to ensure support and optimal physical and mental healthcare for people with mental illness as well as support for nurses in their roles.

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Table 1

Participant Demographics (Frequencies)

	Nurses	**Public**
	n = 101	*n* = 116
Gender F:M	77:24	92:23
		1 non-binary
Ethnicity		
White	14	96
Asian	52	11
Black	22	0
Mixed	13	8
No response	0	1
Religion		
No religion	10	60
Christian	80	40
Muslim	3	1
Other	2	3
No response	6	12

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Table 2

Zero-Order Correlations between all Measures, for Nurses (Below the Diagonal, n = 101) and for the Public (Above the Diagonal, n = 116).

Measures	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
Contact														
1. Contact Quantity	-	.17	.49**	.39**	.66**	-.16	-.02	-.01	.22*	-.10	.18	-.06	.10	.08
2. Contact Quality	.07	-	.38**	-.05	.19*	-.32**	.16	.51**	.07	-.13	.23*	-.17	.16	-.17
3. Positive Contact	.32**	.45**	-	-.02	.48**	-.46**	.05	.24*	.37**	-.30**	.43**	-.05	.23*	-.09
4. Negative Contact	.30**	-.33**	-.17	-	.34**	.38**	-.06	-.16	-.02	.30**	-.16	.31**	-.17	.23*
5. Intergroup Friendships	.51**	.37**	.29**	.17	-	-.27**	.03	.03	.23*	-.12	.29**	-.08	.13	.08
Affective Stigma														
6. Intergroup Anxiety	-.09	-.48**	-.36**	.33**	-.15	-	-.05	-.31**	-.34**	.36**	-.53**	.46**	-.52**	.19*
7. Intergroup Empathy	-.19	.26**	.10	-.05	.12	-.21*	-	.13	.37**	-.10	.25**	.07	.21*	.07
8. Outgroup Attitudes	.08	.40**	-.03	-.12	.23*	-.33**	.35**	-	.20*	-.16	.23*	-.20*	.20*	-.25**
Behavioral Stigma														
9. Behavioral Intentions	-.01	.42**	.16	-.06	.13	-.43**	.45**	.38**	-	-.25**	.29**	-.12	.31**	-.05
Cognitive Stigma														
10. Intergroup Differences	-.08	-.45**	-.12	-.01	-.34**	.34**	-.28**	-.29**	-.38**	-	-.21*	.23*	-.16	.28**
11. Human Uniqueness +	.06	.26**	.18	.05	.27**	-.19	.17	.33**	.28**	-.15	-	-.22*	.75**	-.10
12. Human Uniqueness -	-.20*	-.26**	-.30**	.06	-.01	.31**	-.08	-.12	-.20	.33**	-.18	-	-.27**	.48**
13. Human Nature +	.07	.19	.14	.06	.29**	-.17	.16	.20*	.22*	-.11	.56**	-.11	-	.13
14. Human Nature -	-.12	-.09	-.03	.16	.08	.15	.18	-.05	.12	.14	.25*	.33**	.27**	-

Note: *$p < .05$, **$p < .01$ (two-tailed).

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Table 3

Means (Standard Deviations) of the Contact and Stigma Measures as a Function of Group

Measures	**Nurses** (n = 101)	**Public** (n = 116)	$F(1, 215)$	p	Partial η^2
Contact					
Contact Quantity	4.53 (1.81)	4.28 (1.99)	0.93	.336	.00
Contact Quality	4.21 (0.92)	4.60 (1.24)	6.49	.012	.03
Positive Contact	4.33 (1.46)	5.16 (1.68)	14.82	<.001	.07
Negative Contact	3.74 (1.72)	3.20 (1.50)	6.19	.014	.03
Intergroup Friendships	2.41 (1.70)	3.48 (1.72)	21.39	<.001	.09
Stigma					
Intergroup Anxiety	3.65 (0.95)	3.22 (0.93)	11.59	<.001	.05
Intergroup Empathy	4.98 (1.29)	5.46 (1.45)	6.43	.012	.03
Outgroup Attitudes	4.44 (1.06)	4.81 (1.44)	4.51	.035	.02
Behavioral Intentions	5.14 (1.07)	5.63 (1.26)	9.56	.002	.04
Intergroup Differences	3.99 (1.95)	2.81 (1.69)	22.73	<.001	.10

Note. All measures were assessed on scales ranging from 1 to 7.

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Table 4

Total, Direct, and Indirect Effects of Group on Contact Quality, Attitudes, and Intentions.

Mediators: Intergroup Anxiety, Intergroup Empathy

				95% CI	
Outcome Variable	*B*	*SE (B)*	*p*	*LL*	*UL*
Contact Quality					
Total effect	0.38	0.15	.012	–	–
Direct effect	0.14	0.14	.328	–	–
Indirect effect Anxiety	0.19	0.07	–	0.07	0.33
Indirect effect Empathy	0.06	0.04	–	0.003	0.14
Total indirect effect	0.24	.08	–	0.11	0.40
Attitudes					
Total effect	0.37	0.17	.035	–	–
Direct effect	0.12	0.17	.486	–	–
Indirect effect Anxiety	0.17	0.07	–	0.06	0.32
Indirect effect Empathy	0.08	0.05	–	0.01	0.19
Total indirect effect	0.25	0.08	–	0.11	0.43
Behavioral Intentions					
Total effect	0.50	0.16	.002	–	–
Direct effect	0.17	0.14	.244	–	–
Indirect effect Anxiety	0.18	0.06	–	0.08	0.31
Indirect effect Empathy	0.15	0.06	–	0.03	0.27
Total indirect effect	0.33	0.09	–	0.16	0.51

Note. B = unstandardized coefficient, *SE* = standard error, *p* reported two-tailed, CI = confidence interval, 95% CI bootstrapping (5000 resamples), *LL* = lower limit, *UL* = upper limit. Group was coded as nurses = 0 and public = 1.

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