



# Mental health nursing staff's attitudes towards mental illness: an analysis of related factors

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## Accessible summary

- Employer/workplaces have an impact on mental health nursing staff's general attitudes towards persons with mental illness.
- Staff have more positive attitudes if their knowledge about mental illness is less stigmatized and currently have or have once had a close friend with mental problem.
- More favourable attitudes among staff towards persons with mental illness could be developed and transmitted in the subculture at work places.

## Abstract

There is growing awareness that mental illness is surrounded by negative attitudes and stigmas. The aim of the present study was to investigate factors associated with mental health nursing staff's attitudes towards persons with mental illness. Data were collected from 256 mental health nursing staff employed by one county council and 10 municipalities. The findings show that staff have more positive attitudes towards persons with mental illness if their knowledge about mental illness is less stigmatized, their work places are in the county council, and they currently have or have once had a close friend with mental health problems. The multiple regression model explained 16% of the variance; stigma-related knowledge and employer had significant Beta-coefficients. To account for unknown correlations in data, a linear generalized estimating equation was performed. In this model, stigma-related knowledge and employer remained significant, but a new significant factor also emerged: personal contact, i.e. currently having or having once had a close friend with mental health problems. This indicates correlations at unit level in the county council and in the municipalities. The conclusion is that more favourable attitudes among staff towards persons with mental illness could be developed and transmitted in the subculture at work places.

## Introduction

The negative attitudes, stigmatization, and discrimination associated with mental illness are an important health issue. Consequences for persons with mental illness are the obvious risk of exclusion and that others will reject them (Angermeyer & Dietrich 2006). Stigmatization and discrimination form a great barrier to recovery (Sartorius 2002) and social integration (Hansson *et al.* 2014). Stigma

could be referred to as a social construct, and according to Link and Phelan (2001), stigmatization occurs when people distinguish and label human differences, place persons in categories so as to separate 'them' from 'us', and when these persons experience status loss and discrimination (Link & Phelan 2001). Thus, stigmatization refers to access to a form of power in relation to which elements of labelling, stereotyping, status loss, and discrimination co-occur. Attitudes, on the other hand, include affective,

cognitive, and behavioural responses to, in this case, persons with mental illness (Altmann 2008). There is a growing awareness among mental health staff that mental illness is surrounded by negative attitudes and stigmatization. The focus in the present study is on nursing staff, and on factors that may influence their attitudes and beliefs in a positive direction.

## Literature review

It is well known that negative and stigmatizing attitudes towards persons with mental illness are highly prevalent in the general population (Angermeyer *et al.* 2005, Angermeyer & Dietrich 2006, Högberg *et al.* 2012). During the recent decades, no time trends or desirable changes in these negative attitudes have been observed (Schomerus *et al.* 2012). A range of studies have examined associated factors (such as age, gender, marital status, educational level, and real-life experiences) and found that older people, males, and persons without personal experience of mental illness often have more negative attitudes (Angermeyer & Dietrich 2006, Ewalds-Kvist *et al.* 2012). However, in their review, Angermeyer & Dietrich (2006) found that the explanatory power of sociodemographic characteristics is poor. Familiarity and contact with mental illness is probably the strongest predictor for more positive attitudes (Couture & Penn 2003, Angermeyer & Dietrich 2006).

Moreover, negative and stigmatizing attitudes also are found among health-care staff, and to a surprising extent, and are in several respects comparable with public opinion (Nordt *et al.* 2006, Schulze 2007, Björkman *et al.* 2008, Ross & Goldner 2009). Lack of knowledge, lower education level, less professional experience, and no familiarity, i.e., no friends or relatives with mental illness, are factors related to more negative and unfavourable attitudes (van der Kluit & Goossens 2011).

Stigmatization and discriminatory behaviour constitute a major obstacle in psychiatric care and have been pointed out as a key issue in work with mental illness. Unfortunately, negative attitudes have been shown even among mental health-care staff (Ross & Goldner 2009, Hansson *et al.* 2013). Education level (Munro & Baker 2007), knowledge, and experience of mental illness (Nordt *et al.* 2006, Cleary *et al.* 2012, Hansson *et al.* 2013) have been shown to influence mental health staff's attitudes in a positive direction. Hansson and co-workers (2013) found differences between work setting characteristics; where mental health-care staff working in inpatient services had more negative attitudes than did staff working in outpatient services. The authors' explanation for this difference was that staff in inpatient settings have contact with persons with more severe, long-term and recurrent mental

illness. This, in turn was thought to induce negative beliefs, pessimism, and hopelessness in the individual staff members.

It is the nursing staff who work closest to and have everyday contact with patients. Studies comparing the attitudes of nurses working in mental health services with those working in somatic care have shown more positive attitudes among mental health nurses (Björkman *et al.* 2008). In a European study, mental health nurses' attitudes towards persons with mental illness were mainly positive (Chambers *et al.* 2010).

In summary, the review of the literature supports the 'contact hypothesis', i.e. that increased personal and professional contact is associated with more positive attitudes. The 'dose' of contact is similar for staff working in different mental health services, i.e. they have daily contact with persons suffering from mental illness. However, the panorama of mental illness is wide, and consequently, staff members working in different mental health services have varying professional experiences. There is evidence that negative and stigmatizing attitudes exist among mental health staff, and differences have been shown between work places. Besides personal and professional contact, staffs members' knowledge and sociodemographic characteristics have been identified as related factors. Less is known about how these factors may covary. If we wish to intervene and steer attitudes in a positive direction, there is a need to start by examining the explanatory power of possible related factors. Based on earlier research, we hypothesized that earlier personal contact, professional contact (employer/work places), knowledge, and sociodemographic characteristics would impact on mental health nursing staff's general attitudes towards persons with mental illness. Thus, the aim of the present study was to investigate these factors association with mental health nursing staffs' general attitudes towards persons with mental illness.

## Method

### Design

The study was cross-sectional, correlational, and comparative in design.

### Sample and setting

Invited to participate were; all (393) mental health nursing staff employed by one county council in the central of Sweden and by the 10 surrounding municipalities. In total, 256 staff participated (response rate 65%), representing 32 different units. Of these participants, 83 (32.4%) were employed by the county council and 173 (67.6%) by the

municipalities. Both organizations provide mental health care. In the county council, care is regulated by the Health and Medical Services Act (Ministry of Health and Social Affairs 1982) and provided in inpatient and outpatient settings, while municipal care services are guided by the Social Services Act (Ministry of Health and Social Affairs 2001) and are mainly provided in residential homes and for persons living at home.

### Data collection

Data were collected with self-rated questionnaires. The questionnaires together with stamped return envelopes and information about the study were sent to the staff members' work places. In order to measure mental health nursing staff's general attitudes (affective, cognitive, and behavioural) towards persons with mental illness, the Swedish version of the Community Attitudes towards Mental Illness (CAMI-S) was used. The original version developed by Taylor & Dear (1981) was translated into Swedish and psychometrically tested by Högberg *et al.* 2008, 2012. The Swedish version of the CAMI-S consists of 20 items from the original version, and an additional nine items from the instrument Fear of and Behavioral Intentions towards the Mentally Ill, developed by Wolff *et al.* (1996). Factor analysis from a random sample of the Swedish population ( $n = 2391$ ) showed that those 29 items loaded onto four factors (explained variance not presented) with Cronbach's alpha 0.87–0.91 (Högberg *et al.* 2012). All statements are answered on a 6-point scale from 'totally disagree' to 'totally agree'. Negatively worded items have been reversed in the analysis process, higher values indicating a more desirable (positive) response. The four factors are *intention to interact* (eight statements, Cronbach's alpha in the present sample 0.79), *fear and avoidance* (eight statements, Cronbach's alpha 0.70), *open-minded and pro-integration* (eight statements, Cronbach's alpha 0.82), and *community mental health ideology* (eight statements, Cronbach's alpha 0.63). Cronbach's alpha for the total CAMI-S was 0.92 in the present sample.

Based on our hypothesis, we used the Mental Health Knowledge Schedule (MAKS) to measure staff members' knowledge and parts of the Reported and Intended Behavior Scale (RIBS) to measure staff members' personal contact with persons with mental illness. Both these instruments have been developed in the United Kingdom to evaluate the outcome of a public anti-stigma campaign (Evans-Lacko *et al.* 2010, 2011, Henderson *et al.* 2012). The MAKS consists of a total of 12 items (six stigma-related statements and six statements about what constitutes a mental illness). Both instruments were translated into Swedish by Hansson (2009) and used in populations studies. In the present

sample, with mental health nursing staff, we only used the six stigma-related statements (covering the areas: help seeking, recognition, support, employment, treatment, and recovery). All statements are answered on a 5-point 'scale from 5 = 'totally agree' to 1 = 'totally disagree', and the response alternative 'don't know' was as recommended, coded as neutral (i.e. 3). The total score for stigma-related statements ranged from 6–30, with higher scores indicating less stigma-related knowledge. We used one subscale of the RIBS to measure personal contact: the scale consists of four items on reported behaviour, e.g. 'Are you currently living with, or have you ever lived with, someone with a mental health problem?' The response alternatives were yes, no and do not know, and in the present study these were dichotomized (yes vs. no/do not know) and used as single items. Both the MAKS and RIBS have shown good consensus validity as judged by service users and international experts as well as acceptable reliability (test–retest and internal consistency) (Evans-Lacko *et al.* 2010, 2011). The questionnaire also include sociodemographic characteristics: age, gender, and education level.

### Data analysis

Data were analysed using IBM SPSS Statistics 20 (Armonk, NY, USA). To investigate whether and how mental health nursing staff's attitudes towards persons with mental illness were related to the hypothetical independent variables: staff members' age, gender, education level, personal contact (currently or ever lived with, worked with, neighbour with, friend with someone with mental health problems), stigma-related knowledge (MAKS) and employer/work places multiple regression analyses (Enter) and linear generalized estimating equation (GEE) were carried out. GEE was used to account for unknown correlations in the data (within units), as the staff represented 32 different units. The staff also represented two different organizations, and thus we analysed potential differences between staff working in the county council and staff working in municipalities using independent *t*-tests and Chi-square test. Missing data in the CAMI-S and MAKS were replaced with the group means. Significance levels of 0.05 were set for all tests.

### Ethical considerations

We received permission to conduct the study from the head of the division at the county council and from the heads of social welfare care in the 10 municipalities. The participants received written information about the study purpose and procedure, the voluntary nature of participation, and they were assured complete confidentiality and that the findings would only be presented at the group level. The

national laws (SFS 2003:460) and guidelines were strictly followed. In accordance with Swedish requirements, ethical approval was not required because the study concerned the staff members' work and, did not involve the participants' health.

## Results

The participants characteristics are presented in Table 1. Their mean age was 50 years (from 26 to 68 years), and there were 186 women and 69 men. There were differences in education level: the nursing staff within the municipalities mainly had upper secondary school training, though few had university education, while a greater proportion of staff in the county council had a university education. A greater proportion of staff working in the municipalities reported having a neighbour, or having once had a neighbour, with mental illness.

The multiple regression analysis with the dependent variable staff's attitudes (CAMI-S) and the hypothetical independent variables staff members' age, gender, education level, personal contact (currently or ever; lived with, worked with, neighbour with, friend with someone with mental health problems), stigma-related knowledge (MAKS) as well as employer revealed a significant model (Table 2). The model explained 16% of the variance, but only stigma-related knowledge ( $P < 0.001$ ) and employer

( $P = 0.013$ ) had significant beta coefficients. The GEE model with CAMI-S as the dependent variable revealed a significant effect for stigma-related knowledge ( $P < 0.001$ ) and employer ( $P = 0.043$ ), however in this model personal contact (currently having or having had a friend with mental health problems) also showed a significant effect ( $P = 0.024$ ). This finding indicates correlations at the unit level in the county council and in the municipalities. Altogether, based on these analyses, the findings indicate that mental health nursing staff have more positive attitudes towards persons with mental illness if their knowledge about mental illness is less stigmatized, if their work place is in the county council and if they currently have, or once have had, a friend with mental illness.

This finding deserved further attention, and we proceeded by analyzing and presenting differences between staff employed by county council and the municipalities, respectively, in the four CAMI attitudes factors (Table 3). Significant differences between the groups were found for all factors except for the factor 'Fear and avoidance'.

## Discussion

The present findings showed that stigma-related knowledge, employer/work place and personal contact are associated with mental health nursing staff's general attitudes

**Table 1**  
Characteristics of the participating staff

	Total ( <i>n</i> = 256)	Employer county council ( <i>n</i> = 83)	Employer municipalities ( <i>n</i> = 173)	<i>s</i>
<b>Age M (SD)</b>	49.7 (9.1)	49.9 (9.3)	49.6 (9.4)	0.848 <sup>1</sup>
<b>Gender</b>	( <i>n</i> )	( <i>n</i> )	( <i>n</i> )	0.179 <sup>2</sup>
Female	186	56	130	
Male	69	27	42	
<b>Education level</b>				<0.001 <sup>2</sup>
Upper secondary school	194	41	152	
University	63	42	21	
<b>Professions</b>				<0.001 <sup>2</sup>
Hospital orderly	27	3	24	
Assistant nurse/mental nurse	177	40	137	
Registered nurse/other	22	12	10	
Specialist licensed nurse	29	28	1	
<b>Personal contact</b>	78	27	51	0.663 <sup>2</sup>
Currently living with, or ever lived with, someone with a mental health problem				
Currently working with, or ever worked with, someone with a mental health problem	186	66	120	0.126 <sup>2</sup>
Currently have, or ever have had, a neighbour with mental health problem	145	55	90	0.031 <sup>2</sup>
Currently have, or ever have had, a close friend with mental health problem	195	66	129	0.337 <sup>2</sup>

<sup>1</sup>Independent *t*-test.

<sup>2</sup>Chi-square test.

When numbers do not add 256, there is internal missing data.

**Table 2**

Model: Mental health nursing staff's general attitudes (affective, cognitive, and behavioural) towards persons with mental illness

Model and predictors	Unstandardized beta	Standardized beta	t-value	P-value	VIF*
<b>R<sup>2</sup> = 0.16 Adjusted R<sup>2</sup> = 0.13</b>					<1.31
<b>Age</b>	0.183	0.100	1.647	0.101	
<b>Gender</b>	-0.312	-0.008	-0.137	0.891	
<b>Education level</b>	-1.964	-0.051	-0.763	0.446	
<b>Personal contact</b>					
Live with/have lived with a person with mental illness	2.701	0.075	1.224	0.222	
Work with/have worked with a person with. . . .	-1.679	-0.044	-0.720	0.472	
Neighbour with/have been neighbour with. . . .	0.676	0.020	0.315	0.753	
Close friend with/have been close friend with	-4.706	-0.118	-1.901	0.058	
<b>Stigma-related knowledge (MAKS)</b>	2.561	0.207	4.904	<0.001	
<b>Employer</b>	-5.735	-0.161	-2.373	0.018	

Dependent variable: CAMI-S

CAMI-S, Community Attitudes towards Mental Illness; MAKS, Mental Health Knowledge Schedule.

**Table 3**

Differences in attitudes between mental health nursing staff with work places in the county council and those in the municipalities

CAMI-S factors	min-max <sup>1</sup>	Employer county council m (SD)	Employer municipalities m (SD)	t-value	P-value
<b>Intention to interact</b>	8-48	42.03 (5.19)	39.75 (5.75)	3.064	0.002
<b>Fear and avoidance</b>	8-48	45.06 (4.59)	44.48 (3.98)	1.047	0.296
<b>Open-minded and pro-integration</b>	8-48	40.86 (6.37)	38.27 (7.11)	2.820	0.004
<b>Community mental health ideology</b>	5-30	26.68 (3.18)	24.81 (3.74)	3.920	<0.001
<b>Total CAMI-S</b>	29-174	154.63 (15.59)	147.31 (16.59)	3.370	0.001

<sup>1</sup>min-max value for the factor.

CAMI-S, Community Attitudes towards Mental Illness.

towards persons with mental illness. We found that mental health nursing staff have more positive attitudes towards persons with mental illness if their knowledge about mental illness is less stigmatized, if their work places are in the county council, and if they currently have, or have once had, a close friend with mental health problems.

In line with Hansson and co-workers (2013) we found that work places have an impact on staff members' attitudes. In the present study, attitudes differ between staff employed by the county council and those employed by the municipalities. One reasonable explanation for this finding is that staff working in the county council (inpatient and outpatient settings) are more likely to encounter patients who recover and returns to normal life in the society, while staff working in the municipalities (in residential homes and with persons living at home) encounter patients with long-term and recurrent mental illness. This, in turn, may lead to more positive, or more negative, attitudes towards and intentions to interact with persons with mental illness in society. The fact that staff derives their attitudes from professional experiences has been shown in earlier research. A review by Ross & Goldner (2009), for example, found that mental health nurses have more negative attitudes towards patients' recovery than does the normal population. Another possible explanation could

have been education level; as seen in Table 1, a greater proportion of staff working in the county council had university degrees (registered nurses and specialized licensed nurses). However, in contrast to several other studies (e.g. Munro & Baker 2007, van der Kluit & Goossens 2011), education level did not turn out to be a significant predictor of mental health nursing staff's attitudes towards persons with mental illness. It is evident that employer/work place and organization type are stronger predictors than education level. In the county council, nursing staff work in teams, and the more highly educated staff's knowledge and attitudes may be transferred to and spread within the team. Earlier studies have shown that cultures, at the micro-/meso-level (Hansson *et al.* 2013) and the macro-level (Chambers *et al.* 2010), have a strong impact on staff's attitudes towards persons with mental illness. In line with the present study, Hansson and co-workers found differences between work places, and Chambers and co-workers found differences between countries.

One interesting finding was that the only significant predictor of personal contact was that mental health nursing staff currently have, or have once had, a close friend with mental health problems. Perhaps this finding reflects more than open-mindedness, namely the voluntary



nature of friendship and having an option. In the relation with a partner, a workmate or a neighbour – types of personal contact that have previously been shown to be associated with mental health staff's attitudes (Björkman *et al.* 2008, van der Kluit & Goossens 2011), the alternative to select or deselect is not as obvious. The present finding thus adds new knowledge to the research area concerning what types of contact influence attitudes towards persons with mental illness (Couture & Penn 2003).

As presented in Table 1, a large proportion of staff, currently have or have had personal contact with someone with a mental health problem. Data from two random samples of the general population in England (age 25–45 years), show that 37–39% currently worked with or had worked with a person with a mental illness (Henderson *et al.* 2012). In the present study of mental health nursing staff, as many as 72 % have had that experience. Similar differences could be seen regarding; experiences of a neighbour 29–34% vs. 57%; experiences of a friend, 42–43% vs. 76%. A Swedish population study (Hansson 2009) using the RIBS also found significant differences in occurrence of reported behaviours when comparing persons with and without professional experience. Mental health nursing staff's extensive personal contact with persons with mental illness reflects a so-called 'contact hypothesis'. The simple question is which came first 'the chicken or the egg?' One interpretation is that personal experiences of mental illness are of importance to individuals in their career choice: another is that mental health staff are more open-minded and permissive, causing others to dare to describe and share their problems with them.

As a group, the present participants' attitudes towards persons with mental illness were mainly positive. In comparison with data from the Swedish population (Högberg *et al.* 2012), they gave higher ratings and showed more favourable attitudes on all of the CAMI-S factors. [Intention to interact (one-sample *t*-test: mean difference 5.25; *P*-value < 0.001); Fear and avoidance (mean difference 5.58; *P*-value < 0.001); Open-minded and pro-integration (mean difference 6.47; *P*-value < 0.001); Community mental health ideology (mean difference 3.37; *P*-value < 0.001)] However, there were differences between staff employed by the county council and those working for the municipalities (Table 3), where staff with work places in the county council were more *open-minded and pro-integration* (e.g. placing residents' homes in regular neighbourhoods). County council staff were more tolerant and had a higher degree of *intentions to interact* with someone with mental illness. In contrast, there were no differences between the groups in *fear and avoidance* in relation to

persons with mental illness. One reasonable explanation for the latter finding is that all kinds of professional experience whatever result in knowledge, openness, and security when encountering persons with mental illness in society.

### Method discussion

One limitation of the present study is the nature of the cross-sectional non-random design used; we have identified associations that need to be further explored in future research. The strengths are that the sample includes different professionals, representing different areas of mental health care, and that the response rate to the postal survey was 65%. The instruments used, the CAMI-S, MAKS, and RIBS have all shown acceptable psychometric properties. There were also low rates of internal missing data. No participant has more than one missing data in CAMI-S, respectively in MAKS.

Social desirability needs to be taken in account when participants are asked about attitudes, reported behaviour and stigma-related knowledge. Henderson *et al.* (2012) investigated the impact of social desirability in two of the instruments used: the MAKS and the RIBS. They investigated the association between social desirability scores and data collection method and found that self-rated questionnaires are preferable to face-to-face interviews.

### Conclusions and clinical implications

We have identified factors that seem to influence staff's attitudes and beliefs in a positive direction; employer and work place and knowledge and personal contact have an impact on staff's attitudes towards the persons they are expected to help. Having or not having personal contact with a person with mental illness is one's own choice, but in the subculture at work places stereotypical beliefs and negative attitudes can spread. The present findings revealed that one strong predictor of more positive attitudes among mental health nursing staff are the work place and the subcultural context there. This is a key question for nursing managers and those responsible for mental health-care services. The association between stigma-related knowledge and attitudes remained significant in the two models, and these issues are important to work with to develop more positive attitudes among staff. However, staff do not only need knowledge, information and education, but also to be involved in supervision and processes that actively highlight and challenge their own beliefs and attitudes (Horsfall *et al.* 2010). The present findings are promising, and the conclusion is that more favourable attitudes among staff towards persons with

mental illness could be developed and transmitted in the subculture at work places.

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## References

- Altmann T.K. (2008) Attitude: a concept analysis. *Nursing Forum* **43**, 144–150.
- Angermeyer M.C. & Dietrich S. (2006) Public beliefs about and attitudes towards people with mental illness: a review of population studies. *Acta Psychiatrica Scandinavica* **113**, 163–179.
- Angermeyer M.C., Breier P., Dietrich S., *et al.* (2005) Public attitudes toward psychiatric treatment: an international comparison. *Social Psychiatry and Psychiatric Epidemiology* **40**, 855–864.
- Björkman T., Angelman T. & Jonsson M. (2008) Attitudes towards people with mental illness: a cross-sectional study among nursing staff in psychiatric and somatic care. *Scandinavian Journal of Caring Sciences* **22**, 170–177.
- Chambers M., Guise V., Valimaki M., *et al.* (2010) Nurses' attitudes to mental illness: a comparison of a sample of nurses from five European countries. *International Journal of Nursing Studies* **47**, 350–362.
- Cleary M., Horsfall J., O'Hara-Aarons M., *et al.* (2012) Mental health nurses' views on therapeutic optimism. *International Journal of Mental Health Nursing* **21**, 497–503.
- Couture S. & Penn D. (2003) Interpersonal contact and the stigma of mental illness: a review of the literature. *Journal of Mental Health* **12**, 291–305.
- Evans-Lacko S., Little K., Meltzer H., *et al.* (2010) Development and psychometric properties of the mental health knowledge schedule. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie* **55**, 440–448.
- Evans-Lacko S., Rose D., Little K., *et al.* (2011) Development and psychometric properties of the Reported and Intended Behaviour Scale (RIBS): a stigma-related behaviour measure. *Epidemiology and Psychiatric Sciences* **20**, 263–271.
- Ewalds-Kvist B., Högberg T. & Lutzen K. (2012) Impact of gender and age on attitudes towards mental illness in Sweden. *Nordic Journal of Psychiatry* **67**, 360–368.
- Hansson L. (2009) Psykisk ohälsa – attityder, kunskap, beteende. En befolkningsundersökning (in Swedish). Available at: [http://www.hjarnkoll.se/Global/Rapport%20befolkningsunders%C3%B6kning%20Hj%C3%A4rnkoll%202011%20slutversion%20\(2\).pdf](http://www.hjarnkoll.se/Global/Rapport%20befolkningsunders%C3%B6kning%20Hj%C3%A4rnkoll%202011%20slutversion%20(2).pdf) (accessed 28 June 2013).
- Hansson L., Jormfeldt H., Svedberg P., *et al.* (2013) Mental health professionals' attitudes towards people with mental illness: do they differ from attitudes held by people with mental illness? *The International Journal of Social Psychiatry* **59**, 48–54.
- Hansson L., Stjernsward S. & Svensson B. (2014) Perceived and anticipated discrimination in people with mental illness-an interview study. *Nordic Journal of Psychiatry* **68**, 100–106.
- Henderson C., Evans-Lacko S., Flach C., *et al.* (2012) Responses to mental health stigma questions: the importance of social desirability and data collection method. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie* **57**, 152–160.
- Horsfall J., Cleary M. & Hunt G.E. (2010) Stigma in mental health: clients and professionals. *Issues in Mental Health Nursing* **31**, 450–455.
- Högberg T., Magnusson A., Ewertzon M., *et al.* (2008) Attitudes towards mental illness in Sweden: adaptation and development of the community attitudes towards mental illness questionnaire. *International Journal of Mental Health Nursing* **17**, 302–310.
- Högberg T., Magnusson A., Lutzen K., *et al.* (2012) Swedish attitudes towards persons with mental illness. *Nordic Journal of Psychiatry* **66**, 86–96.
- van der Kluit M.J. & Goossens P.J. (2011) Factors influencing attitudes of nurses in general health care toward patients with comorbid mental illness: an integrative literature review. *Issues in Mental Health Nursing* **32**, 519–527.
- Link B.G. & Phelan J.C. (2001). Conceptualizing stigma. *Annual Review of Sociology* **27**, 363–385.
- Ministry of Health and Social Affairs. (1982) Hälso- och sjukvårdslag (1982:763). Available at: [http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Halso-och-sjukvardslag-1982\\_sfs-1982-763/](http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Halso-och-sjukvardslag-1982_sfs-1982-763/) (accessed 28 June 2013).
- Ministry of Health and Social Affairs. (2001) Socialtjänstlag 2001:43. Available at: [http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Socialtjanstlag-2001453\\_sfs-2001-453/](http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Socialtjanstlag-2001453_sfs-2001-453/) (accessed 28 June 2013).
- Munro S. & Baker J.A. (2007) Surveying the attitudes of acute mental health nurses. *Journal of Psychiatric and Mental Health Nursing* **14**, 196–202.
- Nordt C., Rossler W. & Lauber C. (2006) Attitudes of mental health professionals toward people with schizophrenia and major depression. *Schizophrenia Bulletin* **32**, 709–714.
- Ross C.A. & Goldner E.M. (2009) Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: a review of the literature. *Journal of Psychiatric and Mental Health Nursing* **16**, 558–567.
- Sartorius N. (2002) Iatrogenic stigma of mental illness. *BMJ (Clinical Research Ed.)* **324**, 1470–1471.
- Schomerus G., Schwahn C., Holzinger A., *et al.* (2012) Evolution of public attitudes about mental illness: a systematic review and meta-analysis. *Acta Psychiatrica Scandinavica* **125**, 440–452.
- Schulze B. (2007) Stigma and mental health professionals: a review of the evidence on an intricate relationship. *International Review of Psychiatry (Abingdon, England)* **19**, 137–155.
- SFS (2003:460) Lag om etikprovning av forskning som rör människor (in Swedish). Available at: [http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-2003460-om-etikprovning\\_sfs-2003-460](http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-2003460-om-etikprovning_sfs-2003-460) (accessed 28 June 2013).
- Taylor S.M. & Dear M.J. (1981) Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin* **7**, 225–240.
- Wolff G., Pathare S., Craig T., *et al.* (1996) Community knowledge of mental illness and reaction to mentally ill people. *The British Journal of Psychiatry: The Journal of Mental Science* **168**, 191–198.

## Authors contributions

Study design (all authors) data analysis (GM, ME), interpretation of data (all authors), drafting the article (GM) revising critically (JWJ, ME), approval of the version to be published (all authors).