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| Table 1 Overview of 61 studies included in the scoping review |
| Author, Year | Design/method | Target group | Diagnose | Stigma | Level | Key theme and results |
| **Experiential\*** | **Action oriented¤** | **Macro** | **Meso** | **Micro** |  |
|  | **Attitudes** | **Discriminatory behavior** |  |  |  |  |
| Multiple countries – including at least one Nordic country |
| Alvarez-Galvez (2019) | QuantitativeDescriptive and exploratory analyses  | General population of 21 European countries, including Denmark, Finland, Norway, and Sweden.(N=40185) | Depression | x | x |  |  | x | x | **Multiple discrimination from PMIs perspective** The present study finds a positive association between multiple discrimination and the prevalence of depressive symptoms, and that it varies depending on country, e.g. the effect of multiple discrimination seems to be lower in wealthier European countries. |
| Happell (2018) | QuantitativeDescriptive, cross-sectional (self-reported survey) | Nursing students from Norway, Finland, Ireland, Netherlands, Australia (n=424) | Mental illness in general |  | X |  |  | X |  | **Attitudes towards mental illness**A general pattern of students having positive attitudes towards PMI was revealed in this study. However significant variations by country occurred. Students from Australia and Ireland had more positive attitudes than the students from the other countries |
| Manago (2018) | QuantitativeDescriptive and exploratory analyses | General population of Iceland, Germany, US (n=3713) | Mental illness in general | x | x |  |  |  | x | **Cross-cultural comparison of stigma** In a cross-cultural comparison of mental-health stigma this study finds that the investigated countries have similarities and lower levels of stigma compared to the rest of the world, each country have unique areas of concern, e.g. regarding danger. |
| Krajewski (2013) | Quantitative Descriptive, exploratory analyses, cross-sectional | People with mental illness from Sweden, Croatia, Israel, Lithuania, Malta, Romania (n=796) | Psychiatric diagnoses | X |  |  |  |  | X | **Self-stigma and perceived discrimination and stigma** Over all, this study demonstrated that PMI suffer both self-stigma and perceived discrimination. However socio-demographic and socio-economic and cultural differences affect self-stigma – e.g. the highest mean Internalized Stigma of Mental Illness score was evident among Croatian participants whereas the lowest was seen among Swedish individuals. |
| Andersen (2012) | QualitativeDescriptive, (document analysis) | Autobiographies by people with mental illness from Scandinavia (n=12) | Mental illness in general | X |  |  |  | (x) | X | **Experiences with mental illness**Through text-analyses of autobiographies from Sweden, Denmark, and Norway it was possible to identify 3 main themes of how people write about their experiences of being mentally ill. No geographical differences were identified.  |
| Denmark |
| Dammeyer (2018)  | Quantitative Descriptive (survey) | A Danish national survey (n=18019), n=1398 with mental, and n=4519 with physical disability. | Mental illness in general |  | x | x |  | x | x | **Violence and discrimination, self-reported** People with mental disability reported more discrimination and higher level of all types of violence committed against them than people with no disability and people with physical disabilities. |
| Kring(2018) | Qualitative, descriptive and exploratory analyses (focus group) | 4 recipients of ECT and 7 experts on ECT | Recipients of ECT | X | X |  |  | X | X | **Stigmatizing attitudes and behavior related to ECT**Stigmatizing attitudes and behavior are related to ECT. The lack of knowledge on ECT both among recipients of the treatment and in society generates stigma.  |
| Brink (2017) | QuantitativeCase-control, register, descriptive | Danish inhabitants diagnosed with schizophrenia 1970-1979 (n = 4924) | Schizophrenia |  |  | X |  | X |  | **Discrimination in somatic treatment** Compared to the control group older adults with schizophrenia were significantly less likely to receive medication for cardiovascular diseases and more likely to be treated with analgesics. Overall, hospital admissions and number of days hospitalized were equal to controls, but with significantly fewer general medical outpatient contacts. |
| Jensen (2017) | QuantitativeDescriptive, cross-sectional, questionnaire,incl. vignette | Employees (n=363) | Mental illness in general |  | x |  |  | x |  | **Employees stigmatizing attitudes towards people with mental illness** Employees in the social services hold more stigmatizing attitudes towards people with schizophrenia than depression. The most prevalent of is “unpredictability”. Employees in the social services hold negative attitudes towards PMIs possibilities to acquire a job. The employees’ attitudes are comparable to the general publics.  |
| Jensen (2016a)  | QuantitativeRandomised clinical trial | Employees(n=576) | Mental illness in general |  | x |  |  | x |  | **Employees stigmatizing attitudes towards people with mental illness** The study found positive effect of the Australian educational intervention Mental Health First Aid (MHFA), especially regarding confidence in making contact to PMI and providing help to PMI. |
| Jensen (2016b)  | QuantitativeDescriptive, cross-sectional, survey | General population(n=440) | People with schizophrenia and autism |  | x |  |  | x | x | **Stigmatizing attitudes** The respondents held basic knowledge about autism and schizophrenia. However, they expressed differentiated attitudes and beliefs about autism and schizophrenia. The latter was linked to prevised danger, and autism was associated with high intelligence and creativity. |
| Jensen (2015) | Protocol  | Employees  | People with depression and schizophrenia |  | x |  |  | x |  | **Employees stigmatizing attitudes towards people with mental illness**  |
| Laursen (2014) | QuantitativeCase-control, register, descriptive  | Danish inhabitants living in Denmark from 1995 to 2006 (n=1061532) | Schizophrenia and bipolar disorder |  | X | X |  | X |  | **Discrimination in somatic treatment.** Under-prescription of most cardiovascular drugs among patients with schizophrenia or bipolar disorders. E.g. incident rate ration for cardiovascular prescriptions was decreased in these patient groups compared to the general population. |
| Hansen (2013) | Qualitative Descriptive, exploratory analyses (interview and focus group),  | Relatives of people with depression (n=13) | Depression | X relatives |  |  |  |  | X | **Relatives’ experiences** Relatives’ experiences of living with a depressed person resulted in ambiguous feelings. It often led to subjective burdens as negative and complex feelings developed about the depressed person.  |
| Vendsborg (2013) | QuantitativeDescriptive, cross-sectional, exploratory analyses (self-reported questionnaire) | Staff at psychiatric units (n=548) | Schizophrenia and mental illness in general |  | X |  |  | X |  | **Stigmatizing attitudes among mental health professionals** The overall picture is that staff holds a low level of stigmatizing attitudes. Doctors are more negative regarding the possibility of people with schizophrenia to recover compared to other staff. |
| Buus (2009) | QualitativeDescriptive, exploratory analyses (field observation) | Psychiatric nurses | Psychiatric patients |  | X |  |  | X |  | **Discrimination in mental health treatment**Reports how the practices of recording among psychiatric nurses can influence the treatment of PMI negatively. |
| Munk-Jørgensen (2000) | QuantitativeCase-control, descriptive (register) | Patients with schizophrenia (n=20.000) | Schizophrenia |  |  | X |  | X |  | **Discrimination in somatic treatment**Based on analyses of the Rate Ratio for schizophrenic patients’ admission to somatic departments in Denmark, results show, that individuals with schizophrenia are rarely treated for their physical illness in its early, less severe phases. |
| Finland |
| Maija (2019) | Qualitative (interviews)/ Descriptive, exploratory data analyses | People with sick leave (n=15) | Burnout | X | (x) |  |  | (x) | X | The study illuminates the ways in which individuals suffering from burnout struggle to legitimize their work-related illness and the absence from work in a context where work-related distress is a major epidemic, but simultaneously illness and the absence from work appear as difficult moral positions. |
| Athanaspoulou (2016) | Quantitative Descriptive (document analysis) | YouTube videos (n=80) | People with schizophrenia |  | x | X |  |  | x | **Stigmatizing attitudes** The majority of the YouTube videos present schizophrenia in negative ways. All attitudes were presented in similar ways in Finnish and Greek videos. |
| Ihalaimen-Tamlander (2016) | QuantitativeDescriptive, cross-sectional (self-reported questionnaire incl vignette) | Nurses in primary care health centers (n=264) | Mental illness in general |  | X |  |  | X |  | **Stigmatizing attitudes among nurses** The study showed that nurses’ attitude towards patients with mental illness are mostly positive. Variations according to level of personal contact with PMI occurred. |
| Aromaa (2011a) | QuantitativeDescriptive, cross-sectorial, questionnaire | General populationN=51,6% of 10000 | Depression and mental illness in general |  | X |  |  |  | x | **Stigmatizing attitudes toward people with mental illness** Demographic variables, mental health resources, personal experiences of depression or psychological distress, knowing someone who suffers a PMI and negative stereotypical beliefs are predictors of stigmatizing attitudes towards people with mental disorders. |
| Aromma (2011b) | QuantitativeDescriptive, exploratory analyses, cross-sectional (survey) | General population(n=5160)of which 558 had a major depression  | Depression | X | (x) |  |  | X | X | **Stigma among people with depression**People with depression showed more social tolerance towards people with mental problems. Among those with depression, users of mental health services, as compared to non-users, carried less desire for social distance to people with mental health problems and more positive views about the effects of antidepressants. More severe depression predicted more active use of services. |
| Norway |
| Ree (2018) | QualitativeExploratory analyses (focus groups) | Employees (n=16) | Mental illness in general  |  | X |  |  | X |  | **Workplace stigma and discrimination**In focus groups employees were to discuss workplace inclusion. Inclusion was considered to be easier when employees’ health problems were specific and spoken openly about. |
| Andersson (2010) | QuantitativeDescriptive, cross- sectional, (survey) | Adolescents/ pupils (n=4046) | Mental illness in general  |  | X |  |  |  | x | **School environment of mental health and stigmatizing attitudes** A relatively high, self-reported, prevalence of mental health difficulties and prejudiced attitudes towards mental illness is seen among adolescents. Only 2-3 % of the variation in mental health difficulties and prejudices could be attributed to school environment |
| Tranvåg (2008) | QualitativeDescriptive (interviews) | Relatives of people with bipolar affective disorder (n=9) | Bipolar affective disorder | X relatives |  |  |  | X | X | **Relatives´ experiences** It can be burdensome to be spouse to/cohabitant of a person with bipolar affective disorder. However, insight and meaning can protect them and support at navigation strategy. Nurses play a vital part in empowering and guiding them. |
| Ekeland (2006) | QualitativeDescriptive, exploratory analyses, (interview) | People with mental illness (n=15) | Mental illness in general | X |  |  |  | X | X | **Experienced stigma** In this study it is confirmed that an experience for belonging is important for integration of PMI in communities. Informants’ subjective experiences are very different and depend on how they negotiate their identity. Informants accepting their role as “mental patients” experience less stigmatization then others. |
| Granerud (2006) | QualitativeDescriptive, (focus group) | People with mental health problems (n=17) | Mental illness in general | X |  |  |  |  | X | **Perceived stigma**PMI´s struggles for social integration within the community. “living with shame and fear of exclusion” was the main theme for the participants in this study. |
| Granerud(2003) | QualitativeGrounded theory (interviews)  | Neighbours(n=19) | Mental illness in general |  | X |  |  |  | x | **Experiences of living next door to a person with mental illness**A grounded theory analysis, “more information” is needed among neighbors to PMI that might help reintegrating into community after being hospitalized. |
| Foss (2002) | QualitativeDescriptive, exploratory analyses (field observation) | Users and family,health care workers,general population | Psychiatric patients | X |  |  |  | X | X | **Stigma**In a study of the contextual understanding of the fluid terms “nerves”, it is illuminated how the complex interaction between families, staff and PMI is cultural and vital in mental illness treatment.  |
| Thesen (2001) | QualitativeDescriptive, (knowledge workshop)  | Psychiatric patients (n=11)Health care professional (n=7) | Psychiatric patients | X |  |  |  | X | X | **Perceived stigma and discrimination** Based on data extracted from a meeting between psychiatric patients and service providers, this study finds that classification as a stigmatized “other” has negative consequences for self-esteem and public esteem for PMI |
| Sweden |
| Eivergård (2019) | Qualitative (audio recordings of verbal handovers) | Psychiatric staff | Women Patients in forensic care |  | X |  |  | X |  | **Stigma in gender and mental illness**The study finds that the staff talks about women in a way where feminine norms, knowledge and power are intertwined in a medical discourse. The analyze also reveals that staff indicates that PMI must act responsible in order to be acceptable patients. |
| Löve (2019) | Quantitative Descriptive, exploratory analyses (online survey) | General public (n=3246) | Depression |  | X |  |  |  | x | **Political ideology and stigmatizing attitudes towards depression**Political ideology was associated with stigmatizing attitudes towards depression in Sweden. More conservative ideology and more conservative party affiliation showed more stigmatizing attitudes towards depression. |
| Ohlsson (2018) | QuantitativeDescriptive (document analysis) | Newspaper articles (n =691) | Mental illness in general | (x) | (x) |  |  | X  |  | **Mental health in the media** Mental health is often brought in the foreground in media discourse. And newspapers provide a complex epistemic context for sense-making regarding mental health issues. |
| Hansson (2016) | Quantitative Descriptive, observational, repeated population surveys | General population | People with schizophrenia |  | X |  |  |  | x | **Attitudes, intended behavior, and stigma** A Swedish national anti-stigma campaign has been running 2009-2014 – the campaign was based on social contact theory and involved “lived experiences”. Results from a population survey show that a decrease in the public stigma has occurred in the same period e.g. improvement in attitude towards PMI, mental health literacy and intended future behavior. Thus, the campaign seems to have a positive impact. |
| Jormfeldt (2016) | QualitativeDescriptive, (document analysis) | The interest Alliance for schizophrenia and Allied Disorders, letters from members (n=24) | Schizophrenia | X  |  |  |  | X |  | **Stigma and discrimination regarding housing support** Current available housing support for people diagnosed with schizophrenia is deficient e.g. it lacks to meet basics needs. This problem may lead to severe health risk and reduce of well-being among PMI. |
| Löve (2016)  | Quantitative Prospective cohort study | Young Swedish men from 1969 to 2005 (n=1609690) | Non-psychotic disorders |  | X | X |  | X  |  | **Mental illness, marginalization and mortality** This study finds that non-psychotic disorders are associated with future indications of marginalization’s and mortality. |
| Mirnezami (2016) | QuantitativeDescriptive,repeated surveys | General population/ Vilhelmina, northern Sweden(n=500) | Mental illness in general |  | X |  |  |  | x | **Stigmatizing attitudes** This study examines changes in attitudes toward mental disorders and psychiatric treatment over time in a specific region in north of Sweden. The first investigation was carried out in 1979, the next in 2003 and the current in 2016. The main result is that no notable change in attitudes towards PMI had occurred during the years/and attitude towards PMI had not become more positive. |
| Svensson (2016) | QuantitativeDescriptive, cross-sectional analysis (data from two studies) incl. vignette | Employees from public services (n=1027) | Depression and psychoses |  | X |  |  | x |  | **Stigmatizing attitudes** Higher degree of mental health literacy is related to less stigma and desire for social distance; however, this applies to depression and not psychosis. Negative attitudes were higher in all aspects measured towards persons with psychosis compared to persons with depression.  |
| Allerby (2015) | QuantitativeDescriptive, exploratory analyses, cross-sectional (self-reported questionnaire)  | Relatives to people with schizophrenia (n=65) | Schizophrenia | X relatives |  |  |  |  | X | **Stigma among relatives** 18 % of the relatives of persons with schizophrenia reported that they had experienced stigma, and 23 % avoided situation that could lead to stigmatizing experiences. Half stated that their ill relatives had experienced stigmatized behavior. |
| Svensson (2015) | Qualitative(focus group) | Public sector employeesn=24 | Mental illness in general  |  | X |  |  | x |  | **Employees attitude and intended behavior to people with mental illness**With the use of a content analysis, participants experiences were illustrated. The program was found useful, e.g. due to the program’s practical focus and experienced instructors. |
| Brain (2014) | QuantitativeDescriptive, exploratory analyses, Observational, cohort study  | People with schizophrenia (n=111) | Schizophrenia | X |  |  |  | X | X | **Perceived discrimination and stigma**Perceived discrimination and stigma are widespread and common throughout a number of life areas, and it is associated with negative consequences for PMI. A high level of perceived and experienced stigma reported by people with Schizophrenia (70-90 %) - both in relation to family members, neighbors etc... Anticipated discrimination resulted in avoidance behavior. |
| Hansson (2014a)  | QuantitativeQuasi-experimental, (pre-/post-test) | Police officer(n=120) | Mental illness in general |  | X |  |  | X |  | **Intervention to reduce stigma**In cooperation with a national anti-stigma campaign an intervention for police officers was developed (during their basic training program). There was no significant baseline difference between the control group and the intervention group. Analyses of changes between baseline and the 6-month follow-up showed significant positive changes regarding attitude. |
| Hansson (2014b) | QuantitativeDescriptive, exploratory analyses cross-sectional (interview) | People with mental illness (n=156) | Mental illness in general | X |  |  |  | X | X | **Perceived discrimination and stigma**Perceived discrimination and stigma is widespread and common throughout a number of life areas, and it is associated with negative consequences for PMI. The highest perceived discrimination was reported regarding family, avoidance by people who knew about the mental illness and in keeping friends. |
| Mårtensson (2014) | QuantitativeDescriptive, exploratory analyses, cross-sectional, (self-reported questionnaire) | Mental health nurses(n=256) | Mental illness in general |  | X |  |  | X |  | **Stigmatizing attitudes among nurses** Mental health nurses´ attitude towards mental illness is affected by employer and workplace culture, knowledge, and personal contact to PMI. |
| Svensson (2014) | QuantitativeRandomised controlled trialIncl. vignettes | Public sector employeesn = 406, two-year follow-up n=155 | Mental illness in general  |  | x |  |  | x |  | **Employees attitude and intended behavior to people with mental illness**The study found positive effect of the Australian educational intervention Mental Health First Aid (MHFA), especially regarding confidence in making contact to PMI and providing help to PMI. The two-year follow-up showed that the improvement was all in all maintained. |
| Ewalds-Kvist (2013a) | QuantitativeDescriptive, cross-sectional, questionnaire  | Student nurses (n=421) | Mental illness in general  |  | X |  |  | x | (x) | **Stigmatizing attitudes** Student nurses has negative attitudes towards persons with mental illness. The experience of some type of contact with persons subject to mental illness seemed to affect the students to have a more positive attitudes toward PMI. |
| Ewalds-Kvist(2013b) | Quantitative Descriptive, exploratory analyses, cross-sectional (survey) | General population(n=2391) | Mental illness in general  |  | X |  |  |  | x | **Stigmatizing attitudes and sex, age, and real-life experiences** It was found that sex, age and real-life experience effect attitudes towards PMI. E.g. females were more open-minded but more fearful than males. Increase in age also showed increased open-mindedness. Real-life experiences of PMI exhibited positive attitudes compared to people with no real-life experience |
| Hansson (2013) | QuantitativeDescriptive, cross-sectional, Questionnaire | Mental health professionals (n=140) and PMI (n=141) | Mental illness in general |  | X |  |  | X | (X) | **Attitudes towards people with mental illness**The main result in the study is, that mental health professionals’ attitudes towards PMI is negative, and that PMI holds the same negative attitude towards mental health professionals. |
| Högberg (2012) | QuantitativeDescriptive, exploratory analyses, cross-sectional  | General population(n=2391) | Mental illness in general  |  | X |  |  |  | x | **Attitudes towards people with mental illness**Aspects impacting the Swedish attitudes towards persons with mental illness and their willingness to be neighbor to a person with mental illness comprised experiences of mental illness, gender, and age, born in Scandinavia or outside EU and leave of education. |
| Lundberg (2009) | QuantitativeDescriptive, exploratory analyses, cross-sectional (self-reported questionnaire) | Users of mental health servicesn=200 | Mental illness in general | X  |  |  |  | X | X | **Perceived stigma and discrimination** A higher level of rejection experiences is associated with lower level of sense of coherences and lower ratings of self-related variables (e.g. feelings of confidence/”things will work out” etc..). |
| Markström (2009) | QuantitativeQuasi-experimental pre- /post-test  | Health care students(n=167) | Mental illness in general  |  | X |  |  | x | (x) | **Attitudes towards people with mental illness**Health care students had changed attitudes towards PMI in a less stigmatizing direction after clinical placement. However, regarding some specific diagnoses, e.g. schizophrenia and dementia, no changes occurred. |
| Björkman (2008) | QuantitativeDescriptive,cross-sectional (self-reported questionnaire) | Nurses working in somatic or psychiatric care (n=120) | Schizophrenia and mental illness in general |  | X |  |  | X |  | **Attitudes towards PMI among nurses**Attitudes towards PMI among nurses are in several respects similar to those of the general public. Psychiatric staff hold less stigmatizing attitudes than somatic staff. |
| Ineland (2008) | QuantitativeDescriptive, repeated surveys | General population/ Vilhelmina, northern Sweden(n=500) | Mental illness in general  |  | X |  |  |  | x | **Stigmatizing attitudes** This study examines changes in attitudes toward mental disorders and psychiatric treatment over time in a specific region in north of Sweden. The first investigation was carried out in 1979 and the current in 2003. The main result is that notable changes has occurred over time. E.g. more people associate PMI with act of violence in 2003 than in 1979. In general, this study finds an increase in stigmatizing attitudes, and an increase of trust in the treatment system. |
| Lundberg (2008) | QuantitativeDescriptive, exploratory analyses, cross-sectional (self-reported questionnaire) | Users of mental health servicesn= 150 | Mental illness in general | X |  |  |  | X | X | **Perceived stigma and discrimination** PMI’s subjective quality of life was primarily linked to empowerment and social network.  |
| Lundberg (2007) | QuantitativeDescriptive, exploratory analyses, cross-sectional (self-reported questionnaire) | Users of mental health servicesn=200 | Mental illness in general | X | X? |  |  | X | X | **Perceived stigma and discrimination** Rejection experiences are associated to sociodemographic and clinical characteristics. PMI with higher degree of global function (GAF) perceived less devaluation/discrimination.  |
| Högberg (2005) | QualitativeDescriptive, (interview) | Nurse(n=9) | Mental illness in general |  | X |  |  |  | x | **Attitudes and experiences** The main finding is, that a psychiatric nurse living close to PMI experiences a moral dilemma consisting of a conflict whether to care for the PMI or nurse their own leisure time. |
| Östman (2002) | QuantitativeDescriptive,(interview) | Relatives of patients (n=162) | Patients in acute psychiatric wards | X relatives |  |  |  | X | X | **Relatives experienced stigma**A majority of relatives to PMI experienced psychological factors of stigma by association (83 %). A relatively high proportion of relatives reported that the patient’s mental illness had influenced their own relations with others, and had also led to mental healthproblems in the relatives themselves. |
| Rating scales |
| Finland  |
| Aromaa (2010) | Rating scaleValidation study | N=5504 |  | Attitudes towards people with mental illness |  |  |  |  |  | Setting out to examine the background dimensions of the attitude items used in a large survey in Finland four principal component analyses (PCA) were identified. The internal consistency of the components “depression is a matter of will” and “mental problems have negative consequences” were sufficient to build dimension scales for further analyses. |
| Sweden |
| Björkman (2007) | Rating scaleValidation study | N =40 |  | Measures devaluation/ discrimination and rejection experiences |  |  |  |  |  | The internal consistency of the Swedish versions of two stigma scales, the devaluation and discrimination scale and the rejection experiences scale were investigated and adapted to a Swedish context. Results show that the Swedish version of the scales may be useful in further studies. |
| Högberg (2008) | Rating scaleValidation study | N=256 |  | CAMI - Community attitudes towards mental illness  |  |  |  |  |  | In an evaluation of the instrument Community Attitudes towards Mental Illness (CAMI), this study found that the data could be extracted in three factors labelled as: openminded and pro-interaction, fear and avoidance and community mental health ideology. CAM was before use adapted to a Swedish context; CAMI-S |
| Svensson (2011) | Rating scaleValidation study | N =51 |  | Public attitudes towards people with mental illness |  |  |  |  |  | Two test instruments, “fear of and behavioral intentions toward the mentally ill (FABI) and “Changing Minds: Every Family in the Land” were tested to determine the psychometric properties of two instruments. Both instruments, in the Swedish version, obtained at best moderate test-retest reliability. |

\*Experiental covers perceived, endorsed, anticipated, received, and enacted stigma

¤Action oriented covers public stigma, provider-based, and structural stigma (We have not included self-stigma)