

Disciplinary differences in the study of the relationship between social variables and mental health: A systematic mapping review

Tegan Cruwys ^{a*}

Baptiste Brossard ^b

Haochen Zhou ^a

Gabriel Hellenen-Simpson ^b

Kathleen A. Klik ^{a,c}

Dirk Van Rooy ^a

Philip J. Batterham ^d

Alison L. Cleave ^d

- a. Research School of Psychology, The Australian National University
- b. School of Sociology, Research School of Social Sciences, The Australian National University
- c. Department of Psychology, University of South Carolina – Sumter
- d. Centre for Mental Health Research, Research School of Population Health, The Australian National University

*Corresponding author: Dr Tegan Cruwys, 39 Science Rd, Research School of Psychology, The Australian National University, Canberra ACT 2601. tegan.cruwys@anu.edu.au +61 2 6125 5023

Acknowledgement

ANU College of Social Sciences and ANU Research School of Psychology provided seed funding for the interdisciplinary collaboration that enabled this project. TC and ALC are supported by National Health and Medical Research Council (NHMRC) Fellowships (#1173270 and #1173146). No funder had any role in the study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Abstract

There has been sustained interest in the intersection between social constructs and mental health from diverse disciplines including psychiatry, sociology, and public health. However, no systematic attempt has been made to catalogue what is meant by “social” by different researchers, how variables deemed “social” constructs are linked to mental health, nor whether these patterns differ by academic discipline. Understanding interdisciplinary differences and commonalities may reveal opportunities for interdisciplinary collaboration to enhance our understanding of how social factors relate to mental health. This article presents a prospectively registered systematic map of social approaches to mental health using an innovative synthesis methodology (coding all sentences from a random selection of $N=287$ articles). Results indicated that although approaches are diverse, disciplinary overlap is substantial. Psychology and psychiatry led articles tend to focus on social skills or emotions as *features* of mental (ill-)health, while public health and social sciences led articles tend to focus on social relationships, status, or context as *determinants* of mental (ill-)health. Medicine led articles were most likely to focus on social *outcomes* of mental (ill-)health. Potential growth areas are noted, particularly the relative dearth of *intervention* research drawing upon social approaches. The findings are discussed with a view towards enabling more effective interdisciplinary collaboration.

Keywords: social determinants; social support; social functioning; mental illness; health services; biopsychosocial model

Disciplinary differences in the study of the relationship between social variables and mental health: A systematic mapping review

Factors perceived to have a social basis are critically implicated in the onset of, maintenance of, and recovery from, mental illness (Allen et al., 2014; Cruwys et al., 2013). These social factors (which we use as an umbrella term) include diverse constructs such as social status, social inclusion, social support, and social context. Dominant frameworks that seek to understand mental health have long argued for the inclusion of social factors (e.g., the biopsychosocial model; Engel, 1977). Some researchers have gone further and argued that social factors are primary, and should have a more central role in the conceptualization of mental health than they currently do (Haslam et al., 2019). Despite this, however, social variables remain peripheral in the majority of mental health research (The Lancet, 2018).

This failure to gain traction in mental health research and practice may be partly attributable to the interdisciplinary nature of this work: disciplines traditionally oriented towards mental health (clinical psychology and psychiatry) have vied with diverse disciplines such as medical anthropology, population health, and social psychology to define and understand these phenomena. These different disciplines may bring with them vastly differing assumptions about both what the social variables of interest *are*, and how these variables *relate* to mental health. Furthermore, assumptions may be made about *other* disciplines: a social worker might assume that a psychiatrist holds a biomedical model and eschews community-based treatment options. However, the reality is that very little empirical evidence exists to verify or reject such assumptions. The goal of this project was to better understand disciplinary differences in terminology and frameworks, with a particular focus on understanding precisely what is conceived of as “social” in mental health research. This is a critical step towards better communication across these disciplines, in order to advance both basic and translational research that takes a social approach to mental health.

Disciplinary differences in social approaches to mental health

Previous research on the conceptualisation of social variables in mental health has noted that the medical and clinical professions (particularly psychiatry) tend to conceptualise social variables as developing *subsequent* to mental illness (Saeri et al., 2018). For instance, impairments in social

functioning have been identified as a clinical indicator of several mental disorders including autism spectrum disorder, social anxiety disorder, and depression (e.g., American Psychiatric Association, 2013). By contrast, population health has tended to focus on the social *determinants* of mental health. For example, social capital has been identified as a resource that protects wellbeing and can potentially prevent the onset of mental illness (Stafford et al., 2008). These two orientations differ in at least two ways. First, they position social factors as having the opposite causal relationship with mental health from one another, and relatedly, occurring at different points in *time* (before in population health, versus concurrently or after in psychiatry). Second, these orientations differ in the way they conceptualise the *nature* of the social variable itself: as a (typically community-based) resource in population health, versus as an individual skill (-deficit) in psychiatry (Saeri et al., 2018).

By contrast, the social sciences tend to problematise both “social” and “mental health”; neither construct is reified and instead, social science has tended to explore their dynamic interplay, recently by critically reassessing the notion of social construction (Brossard, 2019; Hacking, 1999; Pilgrim, 2015). For example, the social environment is seen to shape both likelihood of experiencing mental ill-health, as well as the form that illness might take (e.g., via cultural variations). Any stigma that results may lead to a restructuring of the social environment (e.g., unemployment). Still other researchers have brought attention to the power structures within the mental health professions, and noted that the processes of diagnosis and treatment are *themselves* social phenomena that warrant scrutiny (Szasz, 1960; Bentall & Pilgrim, 1993; Pilgrim, 2020). As observed by these authors, such power structures have real consequences for the lives of the clients of mental health services and their families.

Meanwhile, in health psychology and clinical psychology, the biopsychosocial model is predominant (Sarafino & Smith, 2014). This framework specifies social variables as key *determinants* and *maintenance* factors in mental health. Most commonly, the treatment of social variables by these disciplines involves the emphasis on fostering social support as a means to facilitate a person’s recovery (e.g., the stress buffering hypothesis remains influential, after Cohen & Wills, 1985). However, the biopsychosocial model is not uncontested. Several weaknesses have been pointed out across the years, including the absence of a framework specifying (1) how to meaningfully integrate

across the three pillars of biological, psychological and social; and (2) how the different domains may influence one another (Benning, 2015; Nassir Ghaemi, 2009). Social variables remain the neglected of the three cousins. One review found that only 53% of manuscripts published in the leading outlet *Health Psychology* included measures of any social variables, and these were predominantly subjective measures of relationship quality, while broader “macro” factors such as socioeconomic status were typically only included as covariates (Suls & Rothman, 2004). This has led to a call for inversion to a *sociopsychobio* model that foregrounds social determinants (Haslam et al., 2019). However, one review found that leading social psychology journals rarely publish health research (Klein et al., 2015), which may be a barrier to analyses that emphasise social factors in health.

Ultimately though, we know very little about which disciplines are conducting research on social variables in mental health, or how their conceptualisations of these social variables differ. This project aimed to fill this gap with a systematic investigation of social approaches in mental health research, innovatively focusing on how the expression “social” is used in research publications. The key aims of this project are to:

1. Profile *who* is doing research on social approaches to mental health to determine the dominant disciplines in this area.
2. Identify the dominant variables and frameworks employed in each discipline and more specifically, identify differences between disciplines in:
 - a) How they *link* social variables, causally and temporally, to mental health.
 - b) The *usage* of different types of social variables, or the degree to which disciplines differ in the kinds of social phenomena they tend to focus on as their topic of study.
 - c) The relationship between link and usage, in order to identify any patterns whereby some types of social variables tend to be positioned as determinants while other social variables tend to be posited as outcomes.

Method

In order to address these aims, we conducted a systematic mapping review (Grant & Booth, 2009) of the academic literature that explored social variables in a mental health context. Rather than making (disciplinary-bound) assumptions about what constituted a social variable, we took a

pragmatist approach that operationalised this in purely linguistic terms: those variables that were explicitly described as “social” (this word was used as an adjective).¹ Given the quantity of literature on this topic across disciplines, several steps were taken to make the review feasible. First, our review was restricted to journal articles in 2017 – the most recent complete calendar year for which full publication data were available when the search was commenced. We then selected a random sample of 10% of the eligible articles identified for inclusion (following Broekhuizen et al., 2015) to be subjected to our novel method of coding meaning of social variables at the sentence level. We did not limit our search to specific disciplines or specific outlets, but instead considered all English language, peer-reviewed content that could be accessed online or via the authors’ institutional library subscriptions. Multiple coders assessed each article in the final sample and extracted and coded each sentence that linked one or more social variables to mental health.

Sampling and screening strategy

The data extraction strategy and data analysis plan were prospectively registered using PROSPERO ([CRD42019115204](#)). Figure 1 provides a summary of our search and screening strategy. This involved three stages of screening. Stage 1 was a bibliography screen of the 6981 records identified through database search, of which 1701 were excluded as ineligible. Stage 2 screened abstracts of the remaining 5190 records, of which 2287 were excluded as ineligible and left 2903 articles eligible for Stage 3. Of the articles classified as eligible for Stage 3, a random subset (10%) was selected for the systematic mapping review. This was a necessary step in order for the detailed, sentence-level analysis to be feasible. To achieve this, each manuscript was given a numerical code. An online random number generator was then used to select which numbers would form the subset of 10% subjected to sentence-level analysis. In 112 cases, full article screening revealed that a selected article was ineligible, and in these cases the next number in the sequence was used, continuing until the target sample of 10% (287 articles) was reached.

¹ To investigate how inclusive this approach was, and to ensure it was not inappropriately excluding ‘classic’ social approaches to mental health, we retrieved the first 20 results for “socioeconomic status” and “mental health” from 2017 using the same search strategy. All articles used the adjective ‘social’ and were thus captured by the search and inclusion criteria for this review, suggesting that our method of identifying research that takes a social approach to mental health was sufficiently inclusive.

Google Scholar was selected as the search platform over more specialised search tools for three reasons: (1) Google Scholar tends to be more comprehensive than other databases such as Scopus or Web of Science, and thus use of these platforms might have systematically overlooked relevant work in a particular discipline (Mongeon & Paul-Hus, 2016), (2) Google Scholar is updated more rapidly than other databases, and so we expected this to have the most comprehensive data for 2017 at the time the search was commenced (late 2018), and (3) we did not want to make *a priori* assumptions about which disciplines were publishing on these topics, and so wanted to utilise a database that was not specific to any research field.

The search restricted the year of publication to 2017 and specified the following *search terms* that appeared in title, abstract, and/or keywords:

“social” AND : “mental health” OR “mental ill” OR “mentally ill” OR “psychiatr*” OR “mental disorder*” OR “psychopathology” OR “anxiety” OR “stress” OR “addiction” OR “mood disorder” OR “depression” OR “suicide” OR “self-harm” OR “schizophrenia” OR “psychosis” OR “eating disorders”.*

Publish or Perish software (Harzing, 2007) was used to retrieve and extract academic citation information from Google Scholar. This program retrieved the top one thousand most cited documents (including books, web materials, and theses) that met each of the individual search criteria. These documents were then screened for eligibility for inclusion in our analysis.

To be included in our analysis, articles had to be:

- (1) Written in English,
- (2) Published in a peer-reviewed journal.
- (3) Published in the year 2017.
- (4) Have investigated some form of relation between “social” variables and “mental health” or related constructs (e.g., depression, anxiety, schizophrenia, etc.):
 - a. Empirical articles: statistical analysis was used to assess some form of relationship between “social” variables and “mental health”, or;
 - b. Theoretical articles: theory development involves assumptions, hypotheses, or postulates that describe a form of relationship between “social” variables and mental health.

Articles were excluded if the full-text article could not be accessed.

The final sample consisted of 287 articles, from which 1282 sentences were coded. We focused our analysis on the sentence-level, rather than the article level, because it was apparent that authors frequently linked social variables to mental health in multiple different ways throughout the same manuscript.

Analysis strategy

Initial coding. We developed an approach to coding that identified eligible sentences in order to categorise three focal qualities:

- (1) *Discipline* was coded based on the school/department/faculty that the lead author was affiliated with. We focused on the first author because coding all authors' disciplines would not have yielded data that was readily analysable, and we reasoned that in multidisciplinary collaborations the first author's discipline was likely to be the most influential in shaping the focus of the research. Where the discipline of the first author was ambiguous (e.g., they provided only a university-level affiliation, or listed a named centre rather than a field), a web search was conducted to locate the author and their current school/department/faculty was used to code their discipline. For example, a "Centre for Mental Health" in a School of Midwifery and Counselling would be coded as *social work and counselling*, while a "Centre for Mental Health" that was based in a Faculty of Population Health would be coded as *public health*. If this could not be determined, the coding was based on whatever information could be located about the author, such as a current grant topic or the discipline of their PhD. In three cases (0.01% of papers) affiliation could not be determined and was coded as such. Several multiple affiliations were present in the sample; however, these involved a dual appointment between an academic and a clinical/industry role. In these cases, authors' academic affiliation was preferentially coded.
- (2) The explicit or implied *link* between the social variable and mental health, with codes generated as needed to capture all variability (e.g., a determinant, outcome, or intervention).
- (3) The *usage* of the social variable, with codes generated as needed to capture all variability (e.g., status, skills, or behaviour).

The initial coding stage was conducted independently for all articles by three coders with diverse disciplinary backgrounds (authors 2, 3, and 4, whose disciplinary backgrounds are sociology, social psychology, and health psychology, respectively). Discrepancies were resolved through discussions to reach consensus, guided by the more senior coder (second author). An initial qualitative interpretation of the initial coding phase was conducted [citation blinded for peer review].

Second stage of coding. The second stage of coding (conducted by the first author, whose disciplinary background is clinical psychology) sought to consolidate and reduce duplication in the coding system, for ease of interpretation and to make quantitative analysis feasible. The second stage reduced 83 discipline codes to seven (six disciplines which accounted for 90% of variability, plus an ‘other’ category), 19 link codes to five codes (four temporal/causal codes that accounted for 70% of variability, plus ‘other’), and 26 usage codes to seven codes (six usages accounted for 83% of variability, plus ‘other’). More detail of the second stage of coding, including definitions of each type of link and usage, is provided in Table 1 and the Results section.

Statistical approach. To assess whether disciplines differed significantly in their tendency to use particular usages and links, chi square analyses were conducted in which only the core categories of each variable (i.e., not the diverse “other” category) were included in the analysis. Where the omnibus chi square statistic was significant, further pairwise chi-square comparisons were conducted to assess which differences between categories were reliable. These comparisons are presented in the Tables 2-4 in the Results section below.

Results

The disciplinary distribution of research on social approaches to mental health

83 different codes were required in the initial coding to capture the exact disciplinary affiliation of the first authors of the 287 articles. These represented a huge diversity of research fields, ranging from law to philosophy, neuroscience to oncology. Therefore, the *diversity* of disciplines studying these phenomena was the first finding of this systematic map. However, in the simplified second stage of coding, we were able to identify six disciplines that accounted for the vast majority (over 90%) of the research on social approaches to mental health. This ensured that the quantitative analysis was based on a minimum of 55 coded sentences within any particular discipline. These were

treated as mutually exclusive categories for the purposes of coding (e.g., an author with a psychiatry affiliation was not also coded as medicine), although we acknowledge that in reality these disciplines have fuzzy boundaries and may sit within one another. *Psychology* (29%) encompassed all subdisciplines of psychology (e.g., clinical, developmental, social) as well as behavioural science. *Psychiatry* (17%) included all subdisciplines of psychiatry (e.g. child and adolescent psychiatry, neuropsychiatry) as well as neuroscience and psychosomatic medicine. *Medicine* (9%) included all subdisciplines of medicine except those classified as psychiatry, as well as hospital and surgery affiliations. *Public health* (7%) included public and population health, epidemiology, health economics, and biostatistics. *Social work and counselling* (15%) included counselling and psychotherapy, social work, social services and social welfare. *Social sciences* (13%) included, for example, sociology, anthropology, education, and criminology. Three disciplines (psychology, psychiatry, and social work/counselling) accounted for 61% of sentences.

How researchers conceptualise the link between social variables and mental health

The diversity of the research on social approaches to mental health continued to be a defining feature when examining how researchers linked social variables to mental health. Four codes accounted for over 70% of total coded sentences: determinants (22%), features (17%), outcomes (14%) and interventions (18%). Table 1 provides a description and example of each category.

All six disciplines tended to link social variables to mental health in all four ways (see Figure 2). This suggests that there is overlap in the conceptual models used within each discipline, and that there is at least as much variability within disciplines as between disciplines in these conceptualisations.

Further analyses compared the frequency of use of different link types (see Table 1) between each different discipline. The omnibus chi-square test was significant, $\chi^2(15)=70.95$, $p<.001$, and Table 2 summarises the between-category statistical comparisons. The analysis indicated that psychology was the discipline most likely to focus on social variables as *features* of mental illness or a disorder itself – either a symptom or warning sign, or a diagnostic criterion. For example, reduced social functioning as part of the presentation of autism spectrum disorder (e.g., Joshi, 2017). Indeed, the most common combination was the study of social *features* led by a psychologist (96 instances).

By contrast, psychology was the least likely to focus on social variables as *determinants* of mental (ill-)health. Instead, it was public health research that was the most likely to focus on social determinants of mental health, either as a risk or protective factor, or as a direct causal variable, in the development of mental ill-health. For example, this research tended to focus on predictors of mental health in the social environment (e.g., availability of social services) or social context (e.g., social class) (e.g., Ding et al., 2015; Saxena et al., 2007). This was also the most common conceptualisation among social sciences, and social work and counselling. Medicine was the most likely to describe social variables as an *outcome* of mental health – either negatively (e.g. social stigma of the mentally ill) or positively (e.g., social functioning improving as a result of effective treatment (e.g., Scott et al., 2000)). Public health research was least likely to do this, and indeed the least common category was the study of social *outcomes* of mental (ill-)health led by a public health researcher (5 instances). Explorations of social factors in terms of *intervention* – for example, social policy, social factors contributing to recovery, or social treatment – was least differentiated by discipline, but was most prevalent in the social sciences and social work and counselling, and least prevalent in medicine and psychology.

The usage of social variables by researchers

The next goal of this project was to map the nature of the “social” variables that are the focus of research. That is, to clarify the meanings of words to which the adjective “*social*” were applied. Six codes accounted for 83% of the total coded sentences: status (7%), relationships (23%), emotions (13%), skills (19%), behaviour (8%) and context (14%) (see description and examples in Table 1). As can be seen in Figure 3, these six types of usage were present in each of the core disciplines studying social approaches to mental health. Therefore, differences between disciplines were not a matter of absolutes, but rather of degree.

Further analyses compared the frequency of use of different usage types between each different discipline. The omnibus chi-square test was significant, $\chi^2(25)=168.31$, $p<.001$, and Table 3 summarises between-category comparisons. Public health was the only field within which we see the semblance of a consensus emerging, with studies focusing on social relationships accounting for the majority (57%) of usage, and social status also being most prominent in public health (15%). Across

disciplines, a pattern is apparent whereby researchers are, by and large, either focusing on social relationships or social skills. Indeed, the most common combination was the study of social *skills* led by a psychologist (99 instances), and this was also the most common type of social variable studied in psychiatry (57 instances). By contrast, social *relationships* were the most common type of social variable studied in public health (43 instances), social work and counselling (65 instances) and the social sciences (36 instances). Medicine showed equal use of these two types of social variables. The other four types of usage were less common and showed less systematic divergence across disciplines. However, disciplinary-specific patterns were still identified. The study of social *emotions* was particularly common in psychology (26%), but the least common pattern overall was the study of social emotions led by public health (2 instances). The study of social *behaviour* (20%) and social *context* (25%) were most common in the social sciences.

Associations between link and usage of the social variables.

Finally, we considered the relationship *between* link and usage, to investigate patterns in the study of social approaches to mental health, and further to confirm that these two types of classification system were not redundant. Indeed, we see a great deal of variability, with all possible combinations between usage and link represented, ranging from social status as a feature of mental (ill-)health (2 instances) to social emotions as a feature of mental (ill-)health (94 instances); see Figure 4. Nevertheless, there were patterns indicating that certain social variables tended to be linked with mental health in idiosyncratic ways. The omnibus chi-square was significant, $\chi^2(15)=334.89$, $p<.001$, and Table 4 summarises the between-category comparisons. In particular, this analysis reveals that when people talk about the social *determinants* of mental health (i.e., imply causality from social variables to mental health), they tend to be referring to social relationships, social context, and to a lesser extent, social status. Social emotions are primarily conceptualised as *features* (i.e., a constitutive dimension) of a mental health condition. Researchers who focused on social *outcomes* of mental (ill-)health (that is, anything resulting from) tended to focus on social skills, social relationships, or social behaviour. Finally, social *interventions* to support better mental health were most likely to involve social relationships by a large margin.

Discussion

This systematic mapping review synthesised a large random sample of articles published in 2017 to investigate (1) the frequency with which different disciplines study the link between social variables and mental health, (2) the nature of the link made between social variables and mental health in each discipline, and (3) the type of social variables most commonly studied in each discipline.

Two primary findings can be taken from this research. The first, which was apparent from all analyses, was the diversity of social approaches to mental health – in the range of disciplines involved in its study, in the way in which social variables and mental health are understood to relate to one another, and in the types of social variables investigated. Indeed, there was no combination of usage, link, and discipline that did not appear at least once in our sample of 1282 sentences from 287 articles. This is an important finding, because it undermines any claim that any of these disciplines have a unitary or consensus model through which social variables are conceptualised in relation to mental health. Similarly, the idea that any discipline holds a monopoly on the ‘correct’ way to conceptualise social variables in mental health is inconsistent with the evidence from this review. Instead, these findings speak to the richness of this interdisciplinary area of study and its evolving nature. It also speaks to potential challenges in reaching a mutual understanding of common, widely used concepts such as social support, social functioning, or social status.

The second primary finding differentiated the approaches of more individualistic disciplines (especially psychology) from the more societally-oriented disciplines (especially the social sciences). This pattern was proposed by Saeri and colleagues (2018); however, here we provide the first empirical evidence for it as well as finding that it is a pattern generalisable beyond psychiatry versus public health, which were the fields invoked in their argument. In our research, psychology and, to a lesser extent, psychiatry, tended to study social skills and social emotions as *features* of mental (ill-)health. Public health was the field with the strongest internal consensus in its approach to studying these phenomena, being most likely to explore social relationships as *determinants* of mental (ill-)health. Social work and counselling showed a similar pattern to public health, albeit with a stronger orientation towards social interventions. Medicine was by far the discipline most likely to be

interested in social variables as *outcomes* of mental (ill-)health (most often, social relationships and social skills). Finally, social science disciplines were most likely to study social context and social behaviour, and these were most likely to be conceptualised as interventions or as determinants – but rarely as features of mental (ill-)health.

Implications

This research seeks to enable more (and more effective) interdisciplinary collaboration and communication in the study of social approaches to mental health. We posit that there are two primary barriers to advancing integrative models and frameworks in this topic of study. The first is its highly diverse and interdisciplinary nature: very practically, when we discuss “social” factors, we are often not talking about the same thing. Cataloguing the patterns of study that different disciplines employ may shed light on the assumptions and research domains employed by other researchers, thereby facilitating understanding across disciplinary divides. However, the second barrier to effective interdisciplinary collaboration is assumptions made about the conceptual frameworks (and, relatedly, the political motivations) of other disciplines. This review challenged many of these assumptions, with the finding that disciplinary boundaries are overlapping and conceptual approaches to the study of this topic are diverse within every discipline. This has implications for academic journals and researchers, for instance, who may have preconceived ideas about who does mental health research, and the nature of this research. Indeed, such preconceptions may overemphasise disciplinary differences, given that we found that each field had at least as much variance *within* disciplines as *between* them. Such preconceptions might also be challenged through interprofessional education for mental health professionals in training, with a focus on topics including (but not limited to) the social determinants of health, philosophy of science, and discursive approaches that encourage a critical re-evaluation of the power structures in health.

This research also has the capacity to highlight promising new growth areas for research. These topics might be promising either because they are points of interdisciplinary overlap where researchers may learn from one another, or “gaps” where particular kinds of social approaches have been relatively neglected. For example, a focus on social determinants was the most common or second most common type of link among all the disciplines examined, suggesting there is something

of a consensus that this is a core component of social approaches to mental health. By contrast, it was relatively rare for researchers to examine how one's mental health might affect social status, or how social emotions might be determinants of mental (ill-)health.

Finally, the findings revealed a relatively low frequency of research focused on social *interventions* as the key link to mental health (<18%). This suggests that social approaches to mental health are yet to be fully realised in this sphere. Indeed, prominent recent developments in this area suggest that interest in social interventions is growing, including both formal structured treatments as well as the social prescribing movement (Bickerdike et al., 2017; Haslam et al., 2019; Steffens et al., 2019). Those interventions that do exist tend to focus on supporting the development of social relationships. Health research more broadly is plagued by a considerable lag between the development of evidence-based interventions and their implementation into practice (Green et al., 2009). However, we argue that this is the next frontier in ensuring that research on social approaches to mental health ultimately benefits the wider community.

Strengths and Limitations

This review had many strengths, including its large and representative sample of the literature, and the systematic, sentence-level coding by an interdisciplinary team of researchers. Our novel approach to coding of “social” constructs was grounded in the language itself, rather than making assumptions about how researchers use terminology – a first in the field. This sheds light on the way research often uncritically uses the same terminology (e.g., “social factors”) to communicate very different meanings between, but also among, disciplines.

However, like all research, this mapping review had limitations. The coding of discipline was based on the first author's affiliation, which was ambiguous in some instances (e.g., a “mental health” affiliation could be in a hospital, counselling service, or university). Furthermore, it was beyond the scope of this mapping review to consider the affiliations of subsequent authors (which would likely have led to even greater diversity) or the fact that disciplinary training and discipline of employment are not a perfect match. Therefore, the analysis of disciplinary affiliation is likely to be more useful as a global indicator of the major fields where research on social approaches to mental health is being conducted and trends in their foci, rather than at the level of individual papers or researchers. In

addition, the fact that our mapping review cast a very wide net in capturing relevant research required us to restrict our detailed sentence analysis to papers published in 2017 and in English language. We used broad mental health search terms rather than exhaustive diagnostic categories (e.g., psychopathology but not posttraumatic stress disorder). Finally, operationalising our investigation of social variables on the adjective “social” was a limitation, as the former cannot be reduced to the latter, but this enabled a systematic and grounded analysis. Each of these decisions to contain the scope of the project may also have reduced the diversity of the articles included in the analysis.

Conclusions

This project sought to profile the nature of social approaches to mental health across diverse research fields. Utilising a representative sample of 287 academic publications from 2017, we found that research on social approaches to mental health was led primarily by researchers in six disciplines: psychology, psychiatry, medicine, public health, social sciences and social work/counselling. Across disciplines, we found that social variables tended to be linked to mental health in four key ways: as determinants, features, outcomes or interventions. Six types of social variable accounted for more than 80% of the usages: social emotions, social behaviour, social context, social status, social relationships, and social skills. Although all combinations of these links and usages were seen across disciplines, there was a pattern whereby psychology and psychiatry tended to focus on social skills and emotions as *features* of mental health, whereas public health and social sciences tended to focus on social relationships, social status or social context as *determinants* of mental health. The disciplines most focused on social variables as outcomes or interventions were medicine and social work and counselling, respectively. Overall, this review is the first to shed light on the diverse conceptualisations of social variables used across mental health research. This may provide a framework for enabling more effective interdisciplinary collaboration and research progress, as well as highlighting key areas for future investigation. Ultimately, this may fuel growing interest in social approaches to mental health and enable translational research for the benefit of mental health clients.

References

- Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International Review of Psychiatry*, 26(4), 392–407.
<https://doi.org/10.3109/09540261.2014.928270>
- American Association of Psychiatry (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5®)*. American Psychiatric Pub.
- Assari, S., & Caldwell, C. H. (2017). Mental health service utilization among black youth; psychosocial determinants in a national sample. *Children*, 4(5), 40.
- Annayagari, D., Kishore, M. T., Pathki, C. R., & Binukumar, B. (2017). Role of body dissatisfaction in developmental psychopathology among the adolescents with obesity: a matched case control study. *Psychological Studies*, 62(2), 136-141.
- Benning, T. (2015). Limitations of the biopsychosocial model in psychiatry. *Advances in Medical Education and Practice*, 347. <https://doi.org/10.2147/amep.s82937>
- Bickerdike, L., Booth, A., Wilson, P. M., Farley, K., & Wright, K. (2017). Social prescribing: less rhetoric and more reality. A systematic review of the evidence. *BMJ open*, 7(4).
- Bosinelli, F., Cantone, D., Timpano, M., & Sportiello, D. M. (2017). Logical inference and visual memory frailty in patients suffering from borderline personality disorder: a contribution from cognitive psychopathology. *Journal of Psychopathology*, 23, 119-127
- Broekhuizen, K., Pothof, A., De Craen, A. J. M., & Mooijaart, S. P. (2015). Characteristics of randomized controlled trials designed for elderly: A systematic review. *PLoS ONE*, 10(5), 1–8. <https://doi.org/10.1371/journal.pone.0126709>
- Brossard, B. (2019). Why mental disorders flourish and wither: extending hacking's theory of ecological niches. *Social Sciences and Medicine*, 237, 112445
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. Retrieved from <http://ukpmc.ac.uk/abstract/MED/3901065>
- Cruwys, T., Dingle, G. A., Haslam, S. A., Haslam, C., Jetten, J., & Morton, T. A. (2013). Social group memberships protect against future depression, alleviate depression symptoms and prevent depression relapse. *Social Science & Medicine*, 98, 179–186.

<https://doi.org/10.1016/j.socscimed.2013.09.013>

- Ding, N., Berry, H. L., & O'Brien, L. V. (2015). One-year reciprocal relationship between community participation and mental wellbeing in Australia: A panel analysis. *Social Science & Medicine*, 128, 246–254. <https://doi.org/10.1016/j.socscimed.2015.01.022>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196, 129–136.
- Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- Green, L. W., Ottoson, J. M., García, C., & Hiatt, R. A. (2009). Diffusion theory and knowledge dissemination, utilization, and integration in public health. *Annual Review of Public Health*, 30, 151–174. <https://doi.org/10.1146/annurev.publhealth.031308.100049>
- Gregory, B., & Peters, L. (2017). Unique relationships between self-related constructs, social anxiety, and depression in a non-clinical sample. *Behaviour Change*, 34(2), 117–133.
- Hacking, Ian. 1999. *The Social Construction of What?* Cambridge: Harvard University Press
- Harzing, A.W. (2007) Publish or Perish, available from <https://harzing.com/resources/publish-or-perish>
- Haslam, C., Cruwys, T., Chang, M. X. L., Bentley, S. V., Haslam, S. A., Dingle, G. A., & Jetten, J. (2019). GROUPS 4 HEALTH reduces loneliness and social anxiety in adults with psychological distress: Findings from a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 87(9), 787–801. <https://doi.org/10.1037/ccp0000427>
- Haslam, S. A., Haslam, C., Jetten, J., Cruwys, T., & Bentley, S. (2019). Group life shapes the psychology and biology of health: The case for a sociopsychobio model. *Social and Personality Psychology Compass*, 13(8), 1–16. <https://doi.org/10.1111/spc3.12490>
- Joshi, G. (2017). Are there lessons to be learned from the prevailing patterns of psychotropic drug use in patients with autism spectrum disorder?. *Acta Psychiatrica Scandinavica*, 135(1), 5.
- Klein, W. M. P., Shepperd, J. A., Suls, J., Rothman, A. J., & Croyle, R. T. (2015). Realizing the promise of social psychology in improving public health. *Personality and Social Psychology*

- Review*, 19(1), 77–92. <https://doi.org/10.1177/1088868314539852>
- Kong, C., Dunn, M., & Parker, M. (2017). Psychiatric genomics and mental health treatment: Setting the ethical agenda. *The American Journal of Bioethics*, 17(4), 3-12.
- McEwen, C. A., & McEwen, B. S. (2017). Social structure, adversity, toxic stress, and intergenerational poverty: An early childhood model. *Annual Review of Sociology*, 43, 445-472.
- Mitchell, C., McMillan, B., & Hagan, T. (2017). Mental health help-seeking behaviours in young adults. *British Journal of General Practice*, 67(654), 8-9.
- Mongeon, P., & Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics*, 106(1), 213-228.
- Nassir Ghaemi, S. (2009). The rise and fall of the biopsychosocial model. *British Journal of Psychiatry*, 195(1), 3–4. <https://doi.org/10.1192/bjp.bp.109.063859>
- Okpalauwaekwe, U., Mela, M., & Oji, C. (2017). Knowledge of and attitude to mental illnesses in Nigeria: a scoping review. *Integrative Journal of Global Health*, 1(5), 1-14.
- Pilgrim, D. 2015. Understanding mental health: A critical realist exploration. London: Routledge.
- Pilgrim, D. (2020). A critical realist reflection on the power threat meaning framework. *Journal of Constructivist Psychology*, <https://doi.org/10.1080/10720537.2020.1773359>
- Renwick, L., Owens, L., Lyne, J., O'Donoghue, B., Roche, E., Drennan, J., ... & Clarke, M. (2017). Predictors of change in social networks, support and satisfaction following a first episode psychosis: A cohort study. *International Journal of Nursing Studies*, 76, 28-35.
- Saeri, A. K., Cruwys, T., Barlow, F. K., Stronge, S., & Sibley, C. G. (2018). Social connectedness improves public mental health : Investigating bidirectional relationships in the New Zealand attitudes and values survey. *Australian and New Zealand Journal of Psychiatry*, 52(4), 365–374. <https://doi.org/10.1177/0004867417723990>
- Sarafino, E. P., & Smith, T. W. (2014). *Health psychology: Biopsychosocial interactions*. John Wiley & Sons.
- Saxena, S., Thornicroft, G., Knapp, M., & Whiteford, H. (2007). Resources for mental health: scarcity, inequity, and inefficiency. *Lancet*, 370(9590), 878–889.

[https://doi.org/10.1016/S0140-6736\(07\)61239-2](https://doi.org/10.1016/S0140-6736(07)61239-2)

Scott, J. A. N., Teasdale, J. D., Paykel, E. S., Johnson, A. L., Hayhurst, H., Moore, R., ... Garland, A. (2000). Effects of cognitive therapy on psychological symptoms and social functioning in residual depression. *British Journal of Psychiatry*, 177, 440–446.

<https://doi.org/10.1192/bjp.177.5.440>

Stafford, M., De Silva, M., Stansfeld, S., & Marmot, M. (2008). Neighbourhood social capital and common mental disorder: testing the link in a general population sample. *Health & Place*, 14(3), 394–405. <https://doi.org/10.1016/j.healthplace.2007.08.006>

Steffens, N. K., Larue, C. J., Haslam, C., Walter, Z. C., Munt, K. A., Haslam, S. A., ... Tarrant, M. (2019). Social identification-building interventions to improve health: A systematic review and meta-analysis. *Health Psychology Review*.

<https://doi.org/10.1080/17437199.2019.1669481>

Suls, J., & Rothman, A. (2004). Evolution of the biopsychosocial model: Prospects and challenges for health psychology. *Health Psychology*, 23(2), 119–125.

Szasz T. (1960). The myth of mental illness. *American Psychologist*; 15: 113-8

The Lancet. (2018). UK life science research: time to burst the biomedical bubble. *The Lancet*, 392(10143), 187. [https://doi.org/10.1016/S0140-6736\(18\)31609-X](https://doi.org/10.1016/S0140-6736(18)31609-X)

Table 1. Final coding categories used in the analysis.

Categories	Definition	Example
Link		
Determinant	The social variable precedes mental health, and is framed either as causal or as a risk or protective factor in the development of mental (ill-)health.	“Therapeutic interventions, <u>social</u> policy and community reorganization are important preventive responses.” (McEwan & McEwen, 2017)
Feature	The social variable is a diagnostic criterion, or part of the nature of a mental disorder.	“The SIAS is a 20-item questionnaire designed to measure feared <u>social</u> situations involving general social interactions with others.” (Gregory & Peters, 2017)
Outcome	The social variable is a consequence of mental (ill-)health, or the outcome of an intervention.	“Borderline Personality Disorder (BPD) is a severe psychiatric condition which causes an impairment of the individual’s global mental functioning and serious <u>social</u> stigma” (Bosinelli et al., 2017)
Intervention	The social variable is part of recovery from a mental disorder, or influences on recovery, or is a treatment or policy to address mental (ill-) health.	“However, psychosocial interventions are indicated to address the issues of body satisfaction and self-image in adolescents with obesity.” (Annayagari et al., 2017)
Usage		
Status	Objective or subjective position relative to people	“a wide range of negative outcomes including poor upward <u>social</u> mobility” (Assari & Caldwell, 2017)
Relationships	Objective or subjective connection to individuals or groups, or the resources that others provide (like support).	“Diminished <u>social</u> networks are common in psychosis” (Renwick et al., 2017)
Emotion	A motivational or emotional experience (e.g., social anxiety, social desirability)	“Mobilising resources to meet <u>social</u> needs.” (Renwick et al., 2017)
Skills	The capacity or ability to interact with others effectively (e.g., social functioning, social cognition).	“to address residual impairments in <u>social</u> functioning and help with medication adherence” (Kong et al., 2017)
Behaviour	Specific interactions with others that could be positive or negative (e.g., antisocial behaviour).	“ <u>social</u> distance... is the degree to which someone is willing to accept or associate with people having different social characteristics” (Okpalauwaekwe et al., 2017)
Context	Circumstances or environments that are external to the individual.	“Investment in employment, education, housing, <u>social</u> cohesion, sport and the criminal justice system” (Mitchell et al., 2017)

Table 2. Proportion of links between social variables and mental health in each field that conceptualise it in the four most common ways.

	Psychology	Psychiatry	Medicine	Public health	Social work and counselling	Social sciences
Determinant	23% ^a	32% ^b	34% ^b	42% ^b	34% ^b	33% ^b
Feature	38% ^a	28% ^d	14% ^{b,c}	25% ^{a,c,d}	18% ^{b,c}	10% ^b
Outcome	19% ^a	16% ^{a,b}	35% ^c	8% ^b	16% ^{a,b}	24% ^{a,c}
Intervention	20% ^a	24% ^{a,b}	18% ^a	25% ^{a,b}	32% ^b	33% ^b

Note. Superscripts indicate which disciplines differ significantly from one another at $p < .05$ in the proportion of sentences using a particular *link* category (i.e., such that two cells in a row marked ^a and ^b are significant different from one another, but two cells both marked ^b are not).

Table 3. Proportion of usage of different types of social variables in each field.

Discipline	Psychology	Psychiatry	Medicine	Public Health	Social work and counselling	Social sciences
Status	6% ^{a,b}	5% ^a	4% ^{a,b}	15% ^c	10% ^{b,c}	9% ^{a,b,c}
Relationships	15% ^a	22% ^{a,c}	29% ^{b,c}	57% ^d	40% ^b	28% ^c
Emotions	26% ^a	14% ^d	11% ^{b,d}	3% ^c	9% ^{b,c,d}	12% ^{b,d}
Skills	30% ^a	31% ^a	28% ^{a,b}	8% ^c	19% ^b	7% ^c
Behaviour	6% ^a	8% ^a	8% ^a	8% ^a	9% ^a	20% ^b
Context	16% ^{a,b}	20% ^{b,c}	20% ^{a,b,c}	9% ^a	13% ^{a,b}	25% ^c

Note. Superscripts indicate which disciplines differ significantly from one another at $p < .05$ in the proportion of sentences using a particular *usage* category (i.e., such that two cells in a row marked ^a and ^b are significant different from one another, but two cells both marked ^b are not).

Table 4. Relationship between the usage of particular types of social variables and the link made to mental health.

	Determinants	Feature	Outcome	Intervention
Status	15.7% ^a	1.1% ^b	6.5% ^c	5.3% ^c
Relationships	33.9% ^{a,b}	6.3% ^c	26.0% ^b	43.7% ^a
Emotions	3.8% ^a	49.7% ^b	4.5% ^a	6.6% ^a
Skills	10.2% ^a	22.8% ^b	33.8% ^c	14.6% ^{a,b}
Behaviour	6.8% ^a	6.9% ^a	21.4% ^b	13.9% ^b
Context	29.7% ^a	13.2% ^{b,c}	7.8% ^c	15.9% ^b

Note. Superscripts indicate which type of *link* differ significantly from one another at $p < .05$ in the proportion of sentences using them in a particular *usage* category (i.e., such that two cells in a row marked ^a and ^b are significant different from one another, but two cells both marked ^b are not).

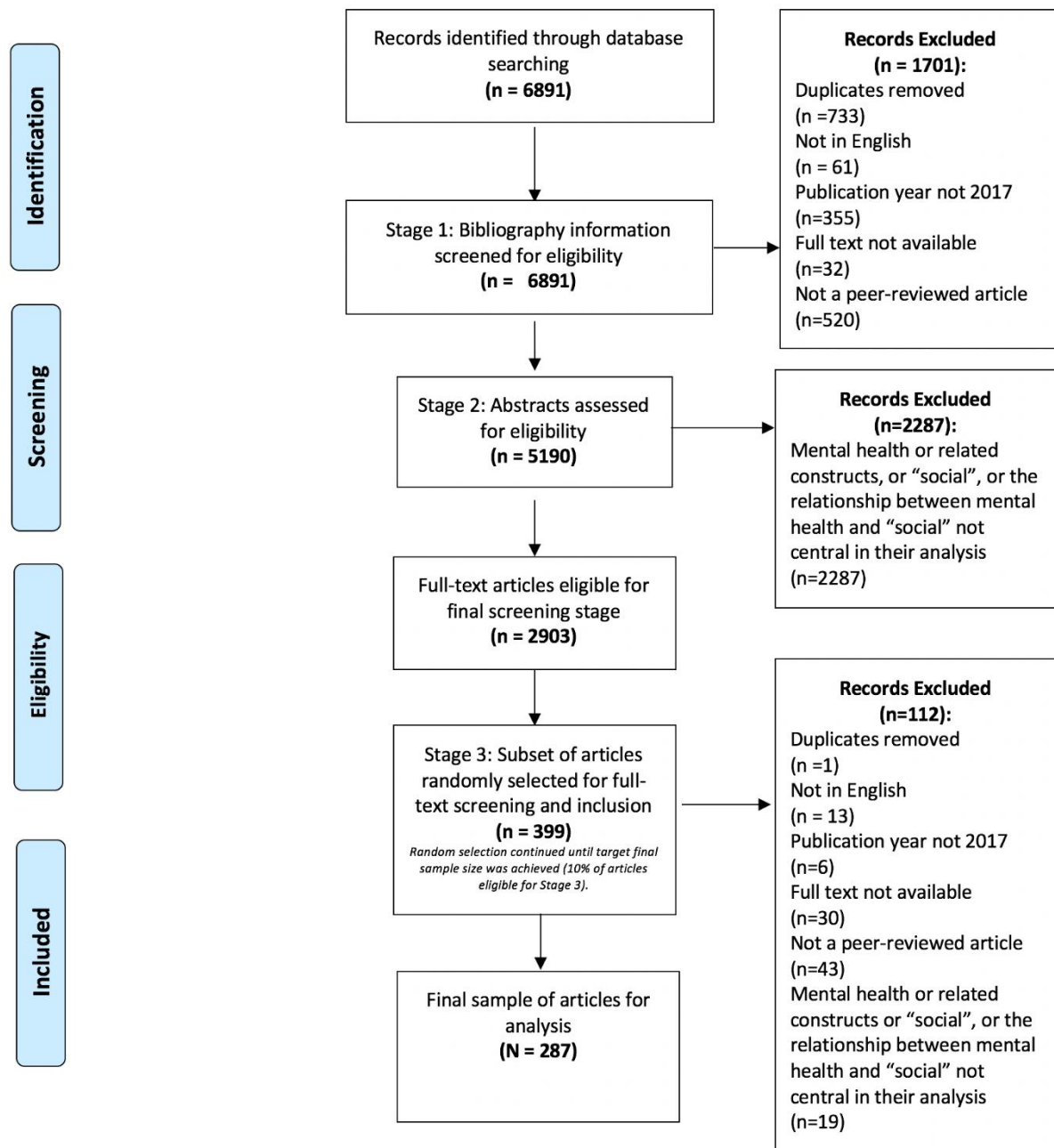


Figure 1. PRISMA screening process to identify the final sample of articles for analysis.

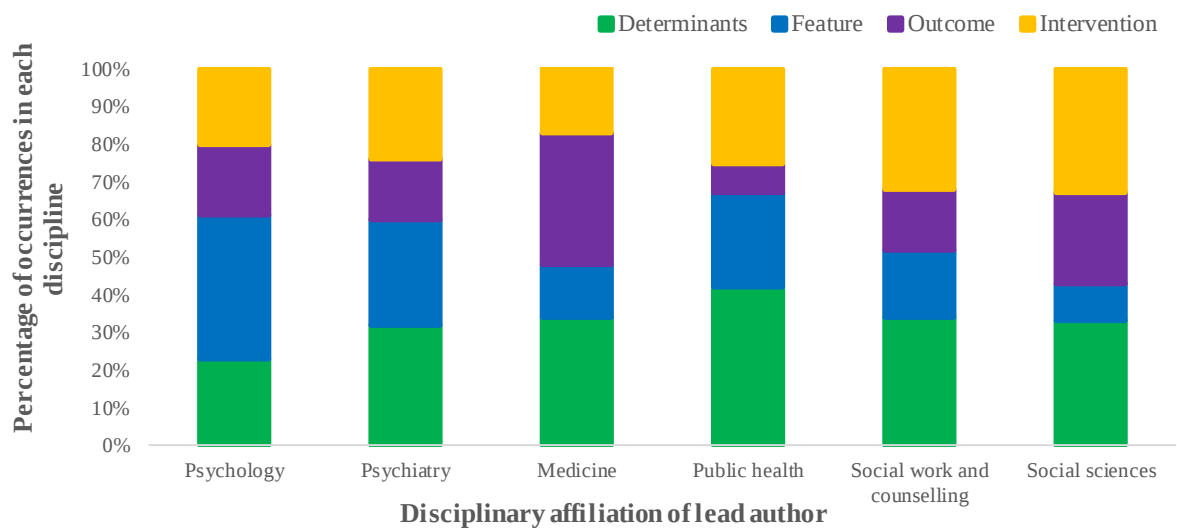


Figure 2. Disciplines differ in how they tend to conceptualise the link between social variables to mental health.

Note. Based on the subsample of 822 sentences which was assigned one of these four link codes.

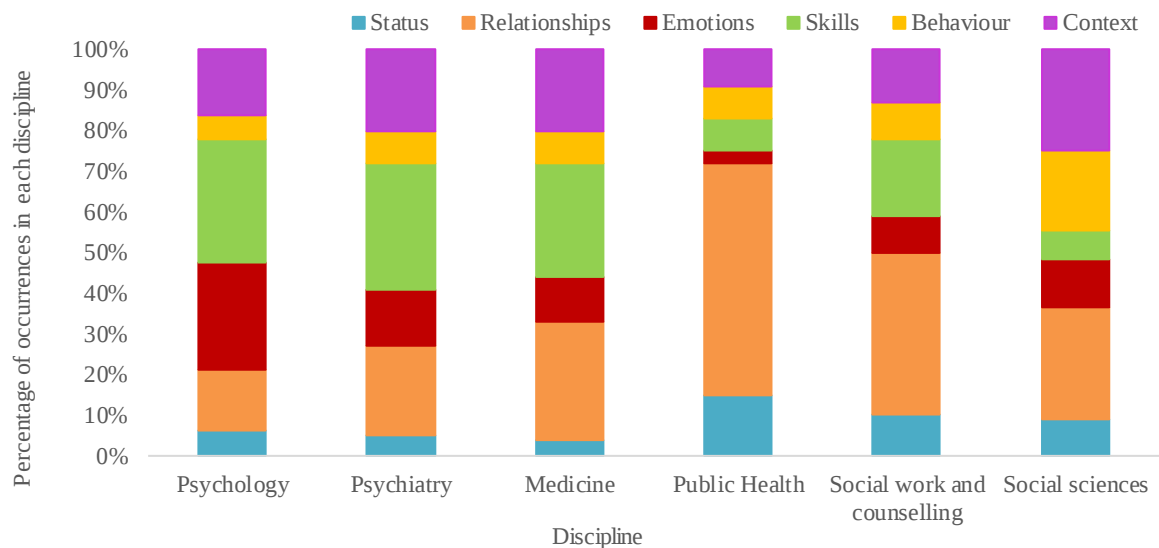


Figure 3. Differences between disciplines in the six most common usages employed for social phenomena.

Note. Based on the subsample of 971 sentences which was assigned one of these six usage codes.

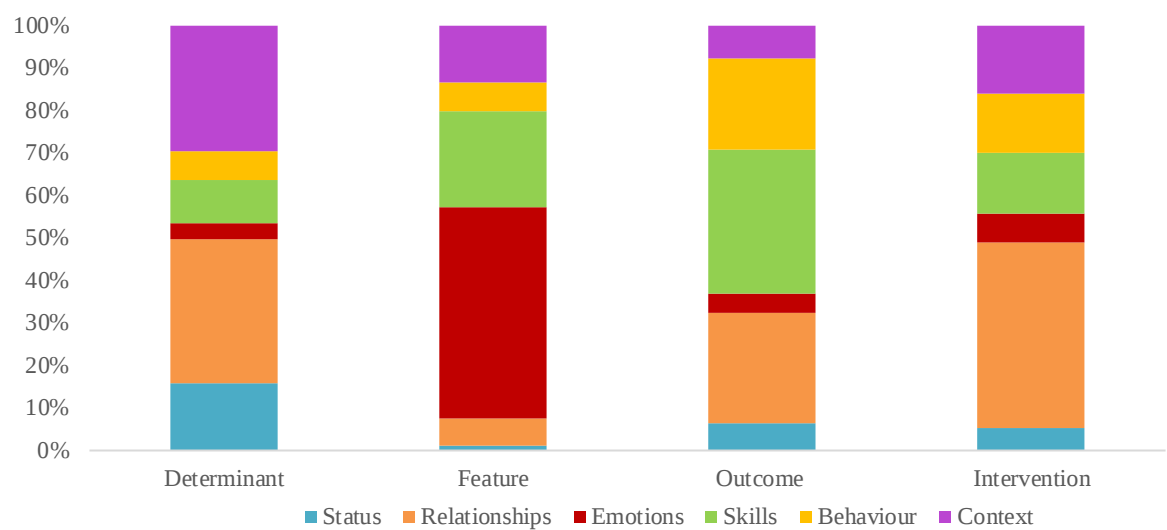


Figure 4. Association between social variable usage (represented by different colours) and the nature of its temporal link to mental health (in different columns).

Note. Based on the subsample of 730 sentences which was assigned both one of six named usage codes and one of the four named link codes.