

RUNNING HEAD: DEPRESSION STIGMA IN UNIVERSITY STUDENTS: FACULTY
DIFFERENCES AND DE-STIGMATISATION



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*Depression Stigma in University Students: Faculty Differences, and
Effects of Written De-stigmatisation Strategies*

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Abstract

Stigma towards mental illness remains prominent today, and has significant negative impacts on treatment-seeking, outcome, and many aspects of life. De-stigmatisation strategies have been developed to target familiarity and knowledge, with some limited evidence for their success. The aim of this research was to investigate if faculty differences in stigma are present in a sample of 109 university students, and if familiarity with mental illness influences scores on stigma-related measures. Additionally, an aim was to assess any impact of brief, written destigmatising strategies on knowledge and stigma. Results indicated some differences between faculties on stigma-related measures, with engineering students showing greater stereotype attribution and less depression literacy. Those familiar with mental illness displayed less stigmatising attitudes, and greater literacy. Participants were assigned to read one of four types of written materials after completing the first set of measures. While there were no significant differences between texts on changes in literacy, there were some changes in stigma, and stereotype attributions. Results support previous findings of faculty differences in some but not all stigma measures, and the influence of familiarity on stigma measures. There is some support for brief intervention efficacy in written format. Possible methodological issues include the sampling method and the extensive use of self-report measures.

Keywords: stigma, depression, mental illness, familiarity, literacy, stereotypes, university, students

Depression Stigma in University Students: Faculty Differences, and Effects of Written De-stigmatisation Strategies

Mental illness is regularly identified in the medical and psychological literature as one of the largest contributors to the global disease burden, with significant impacts and costs on an individual level (in terms of personal health, wellbeing, and relationships) and on a societal and economic level. Depression is one of the most prevalent across many aspects of society, with lifetime prevalence rates of 10-15% (Lépine & Briley, 2011) and is predicted in the very near future to have the second-largest disease burden of any illness (Casados, 2017).

In comparison to the recent past, the medicalisation of mental illness, and the deinstitutionalisation of its treatment has allowed – in theory - those with mental illness to be fully integrated members of society (Gaebel, Rössler, & Sartorius, 2017). However, despite these improvements, individuals diagnosed with mental illness still face difficulties in many aspects of daily life. On average, early mortality rates among those with mental illness are higher, than the general population (Colton & Manderscheid, 2006). While the factors influencing this stark statistic are multiple and complex, there is one factor in particular that seems to significantly influence the course, outcomes, and impact of illness – stigma (Casados, 2017).

Concept of stigma and its history

Stigma, as used today, is a general term describing the negative attitudes and behaviours that create and perpetuate stereotypes, prejudice, and discrimination (Fox, Earnshaw, Taverna, & Vogt, 2017). It typically refers to the devaluing and reduction of certain members of society to a negative ‘other’ based on one or more arbitrary characteristics that ‘marks their identity’ (Pescosolido, 2013) – in this context, a diagnosis of mental illness.

Recent years have seen a dramatic proliferation of articles discussing and researching stigma towards mental illness (Scheid & Wright, 2017), indicative of its current status as a research priority. Since initial conceptualisations of stigma relating to mental illness, its increase in popularity in the field has been dramatic, with articles including the term rising from around 30 in the 1990’s, to over 1500 in 2010 (Gaebel et al., 2017). While perhaps not

all will be specific to mental illness, the overwhelming majority (~90%) appear to be (Phelan, Link, & Dovidio, 2008). With this proliferation of research, it is understandable that some claim it has become a somewhat unwieldy area of study, suffering from a lack of clarity (Corrigan & Shapiro, 2010). This is reflected in continuing discussion around fundamental terminology, how precisely to measure and interpret key constructs, and the best way to compare and track changes over time given the sheer number of measures that are used (Phelan et al., 2008).

The expansion of diagnostic manuals and categorisation of mental illnesses, sparked a 'labelling' debate centred on whether stigma was related to actual behaviours of the illness, or the label and societal expectations of it, and some debated the existence and impact of stigma itself (Link & Phelan, 2010; Overton & Medina, 2008). Modified labelling theory – a somewhat more moderate view - maintained that the label of a mental illness doesn't 'create' the illness, but through a reciprocal interaction with societal norms, and stereotypes, can influence the course of the illness and other aspects of the lives of those diagnosed (Link & Phelan, 2010). The proposals of modified labelling theory regarding the impact of societal knowledge, familiarity, and stereotypes on the experiences of those with mental illness, are most important in the context of this research paper.

Debate continues on the potential purpose of stigma, given its continued presence in society. Some take an evolutionary perspective, arguing that it serves as a form of disease avoidance (Bos, Pryor, Reeder, & Stutterheim, 2013). Perhaps more relevant to today's society is ideas of social exclusion, domination, and norm enforcement (Phelan et al., 2008). These potential functions might perhaps explain why stigma of various kinds persists, because perhaps it serves a purpose in maintaining in-/out-groups, and class structures, by 'punishing' deviance from accepted norms (Norman, Sorrentino, Windell, & Manchanda, 2008).

Regardless of its supposed function, stigma in any form inherently separates and discriminates (Angermeyer & Matschinger, 2003). The reciprocal social interactions (or more accurately, lack of) reduce opportunities for contact interactions, and communication (Corrigan, 2004). This limits the ability to dispel or disconfirm any narrow, misleading stereotypes that people may possess (Rogers & Pilgrim, 2014). A diagnosis of a mental illness, and the accompanying concerns about judgement and discrimination can result in wide-ranging negative impacts, which is the focus here.

Impact of stigma on treatment-seeking, and outcomes

Stigma, and the fear of discrimination and judgement resulting from the label of a mental illness is often identified as one of the biggest barriers to treatment-seeking (Angermeyer & Matschinger, 2003). Stigma is thought to severely impact on the course and the prognosis of mental illness, and this impact seems to be more of an issue in those with moderate severities of illness, rather than the most severe (Casados, 2017). The precise reasons for this are unclear, and beyond the scope of this research paper, but – taking a cue from attribution theory (concerning the perceived level of personal responsibility for cause, and control of progression/presentation of an illness (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003) - it is possibly related to ideas of controllability. Perhaps more moderate symptoms can be more easily hidden, which might raise questions in some as to the validity of the illness.

Beyond impacting on the course and outcome of illness itself, stigma has detrimental impacts on other life domains, such as personal relationships, income, housing and healthcare (Norman et al., 2008). Today, while explicit discrimination behaviours are frowned upon, there are still avenues for such attitudes to be expressed more subtly, and impact on those diagnosed with mental illness (Rüsch, Corrigan, Todd, & Bodenhausen, 2011). While behavioural expressions of discrimination may have changed, negative stereotypes that drive these behaviours are more enduring (Pescosolido, 2013). Stereotypes are generally automatically activated, and are solidified through socialisation, and the prevailing social norms, which are potentially more difficult to influence and change (Norman et al., 2008).

While there is a perception of reduced stigma, and a more tolerant and caring society, research suggests that actual attitudes have not improved significantly, and in some cases may have deteriorated over time, with no consistently observed decrease in stigma towards mental illness (Angermeyer & Dietrich, 2006; Angermeyer, Matschinger, & Schomerus, 2013). This apparent perception of a decrease in stigmatising attitudes however, is not necessarily reflected in those with mental illness, who still typically perceive more stigmatising and uninformed attitudes in the general public (Larkings, Brown, & Scholz, 2017). With a significant number of those with depression still reporting experiencing some form of discrimination (Lasalvia et al., 2013).

The role of knowledge and familiarity in stigma

Factors that seem to be regularly linked to stigma are knowledge (also referred to as ‘literacy’) and level of familiarity (extent of previous experience or contact with mental illness).

Knowledge. Despite apparently increased knowledge and awareness, ill-informed and misconceived ideas of mental illness persist around the world (Hinshaw & Stier, 2008; Stuart & Arboleda-Flórez, 2012). This applies even to those most high-profile disorders, that people have more knowledge of, such as depression (Furnham, Ritchie, & Lay, 2016). The prominence of the disorder in public consciousness doesn’t seem to lead to more accurate knowledge or more accepting attitudes (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000), with depression still often viewed more negatively, particularly in implicit measures (O’Driscoll, Heary, Hennessy, & McKeague, 2012). What has been identified is the nature, content, and accuracy of this knowledge that is important. Depression may indeed be more present in public consciousness, but perhaps is incorrectly thought synonymous with ‘regular’ and transient sadness (with the term often used as such).

Familiarity. A degree of familiarity with mental illness of any kind has generally been linked with reduced levels of stigma (Corrigan et al., 2001; Sowislo et al., 2017). Those who have any personal experience of mental illness typically display less negative stereotyping (Rüsch et al., 2011), and it stands to reason that those closest to those with a mental illness, will also display reduced levels of stigma. It is possible that interacting with someone diagnosed with mental illness, provides greater opportunities to dispel any negative stereotypes and identify similarities, that might reduce the levels of stigma. Research suggest that while stigma is present in younger populations (suggesting that the socialisation processes and development of stereotypes starts early on in life) this is particularly pronounced in those with less familiarity with mental illness (Crowe, Averett, & Glass, 2016). Therefore, one potential target in attempts to reduce stigmatising attitudes is increasing the degree of familiarity, earlier on in life. This has led research to focus on younger adolescent and student populations, and to develop targeted de-stigmatisation and educational strategies promoting greater familiarity and knowledge to improve understanding and debunk negative stereotypes (Angermeyer & Dietrich, 2006).

Stigma-Reduction Strategies

The continuing prevalence of mental illness stigma, and the wide-ranging impact, has cemented the issue as a significant priority for governments, and healthcare organisations around the world, with seemingly nowhere free from misconceptions and stigma of mental illness (Koschorke, Evans-Lacko, Sartorius, & Thornicroft, 2017). This has led to the implementation of many large-scale de-stigmatisation strategies in various countries around the world (Beldie et al., 2012; Gronholm, Henderson, Deb, & Thornicroft, 2017). These typically aim to increase knowledge and familiarity with those who are diagnosed with a mental illness. Strategies to combat mental illness stigma have been part of several nationwide campaigns in many countries over the years, for example Time to Change (UK) (Evans-Lacko, Corker, Williams, Henderson, & Thornicroft, 2014). Large-scale strategies benefit from a significant amount of governmental and organisational support and funding, and are often multi-phase packages conducted and implemented over many years (Henderson, Evans-Lacko, & Thornicroft, 2013). The effectiveness of these ongoing strategies is yet to be fully determined (Quinn et al., 2014), with arguments that effective anti-stigma programmes are still some way off, and, given the discrepancies in stigmatising attitudes depending on the specific diagnosis, such a broad approach may not be appropriate (Angermeyer & Dietrich, 2006). In addition, it is difficult to assess the efficacy of any of these programs in great detail without an adequate control group (Henderson et al., 2013) which is difficult to implement as part of these strategies, but should be a priority for future research.

Some have even gone so far as to say that despite widespread deployment of certain strategies to reduce stigma, the actual evidence base for their efficacy is severely limited (Arboleda-Flórez & Stuart, 2012). Instead of broad, large-scale interventions, it is possible that more work needs to be done on a smaller scale developing more cost-effective strategies. This could help determine what strategies are most effective, and how populations differ in their response to them, before employing them on a wider scale.

One example of a large-scale strategy that failed to achieve its aim is the attempt to emphasise the biomedical/neural factors involved in the development of mental illness. By comparing mental illness with physical illness/disability, it was hoped there would be a reduction of stigma by reducing feelings of blame or personal responsibility (Askevis-Leherpeux, Crétin, Genin, Schiaratura, & Hofer, 2015). Much of mental health advocacy

equate mental health and physical health, but when taken to its extreme, this type of strategy can have the opposite effect of what was intended. Subsequent research has tended to find that those who ascribe to more biomedical/genetic causal explanations tend to express more stigmatising/prejudiced attitudes/beliefs (MacDuffie & Strauman, 2017). Reductive and restrictive strategies that focus solely on causes (as was the case here), are not particularly effective (Sears, Pomerantz, Segrist, & Rose, 2011). While such explanations may reduce blame or perceived responsibility, they may emphasise ideas that the diagnosis is permanent, unchanging, and dangerous (Schomerus, Matschinger, & Angermeyer, 2014). Such negative or ambivalent attitudes appear to be particularly prominent in medical students, medical professionals (Stull, McGrew, Salyers, & Ashburn-Nardo, 2013; Ungar, Knaak, & Szeto, 2016), and even mental health professionals (Kopera et al., 2015), who it could be argued should have greater knowledge and familiarity with mental illness, and theoretically, more accepting attitudes. One explanation is that they are more likely to subscribe to a biogenetic or medical model of mental illness. This is not to say that education on the role of biological factors in mental illness can't be useful in reducing stigma, but it may only be effective as part of an intensive and focused programme (Han & Chen, 2014), that would ultimately prove costly and less amenable to widespread dissemination.

What this example emphasises is that the failure of certain strategies to reduce stigmatising attitudes is not necessarily solely due to a lack of education in the target population, What is important going forward is the limited and reductive nature of an approach that focuses solely on causes/attribution for mental illness, and doesn't target the stereotypical beliefs and attitudes of the public (Scheid & Wright, 2017). There are suggestions that the focus of any anti-stigma strategy should involve more than just factual information, and instead include the actual experiences of living with mental illness (Lauber, Nordt, Falcato, & Rössler, 2004).

Some have suggested that education should focus on increasing knowledge of the experiences, social factors, symptoms, treatments and prospects of recovery, rather than solely on causal information (Dijker & Koomen, 2003). the most effective strategies may be to focus more on promoting rounded knowledge, interaction, and positive attitudes rather than reducing negative (Corrigan & Shapiro, 2010). This particular line of thought perhaps explains why alternative strategies such as protest (moralising and admonishing ill-treatment of those with mental illness) are often found to be least effective at reducing stigma in

individuals (Rüsch, Angermeyer, & Corrigan, 2005) potentially provoking a ‘rebound’ or hardening of negative attitudes in response.

Other strategies, besides education, have been employed to attempt to increase feelings of familiarity with the individuals and their experience of mental illness. Such an effect has been achieved through the employment of contact-based interventions. Some research suggests that contact-based interventions may be promising for reducing stigma (Stuart & Arboleda-Flórez, 2012), though the exact nature of the contact may also be important. In such contact situations, it appears that similarities should be emphasised, with only a mild disconfirmation of commonly held stereotypes. This potentially highlights a significant issue with large, wide-scale ‘one-size-fits-all’ strategies that have been mentioned previously, in that they are unlikely to be specific and targeted enough to promote the necessary similarities that may make de-stigmatisation efforts most effective.

While in an ideal world, facilitating physical contact with those with mental illness would be the go-to strategy, a significant limitation is the difficulty in developing and employing regular, significant contact on a larger scale, in terms of both logistics and cost. However, it has been found that such contact need not be direct, with some finding success at reducing stigmatising attitudes from brief, indirect contact (Atal, Wang, & Biella-Battista, 2017), and even presentations and video-based contact (Hackler, Cornish, & Vogel, 2016) that are of similar efficacy to positive, ‘real’ contact. This potentially opens the door for other strategies, that have the appearance of ‘contact’, but are far more easily developed and disseminated, through mediums such as social media and other online platforms. It is unclear how effective this is, and what format might be most effective i.e. fact/evidence-based educational information directly targeting stereotypes, or personal accounts/experience-based information, and for what populations such formats might be most effective.

While distinctions are often made in the literature between education and contact-based strategies (and this paper appears to be no exception) they are inherently inter-related, and recent research has suggested that while both interventions separately can be equally effective (Kosyluk et al., 2016) hybrid or combined interventions might prove to be most effective (Stefanek, 2017). There is also a suggestion that even brief interventions can be effective if they are presented in the right way, though current evidence is limited, with more research needed (Gronholm et al., 2017).

University Students and Stigma

University/college student populations have been identified as most at-risk of first-time development of mental illness symptoms that in turn can become a barrier to achievement and success in education, relationships, and treatment outcome. A fear of disclosure is often present; only around 1 in 3 appear to seek help (Abhold, 2017; Lyndon, Crowe, Wuensch, McCammon, & Davis, 2016). The prevalence of mental illness is found to be significantly higher among students than the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013) and stigma is likely to exacerbate this problem.

Aside from the practical benefits of conducting research in university student populations, the very nature of university lifestyle and environment, and the significance of peer-support is thought to be very conducive to research and potential interventions (Abhold, 2017). In addition, it suits the prominent focus of research today to target younger and younger populations, given findings suggesting that stigmatising attitudes to mental illness and particularly depression are present even in the very young (O'Driscoll et al., 2012). While national campaigns are undoubtedly useful, there is value in investigating focused interventions, particularly as university campuses could be considered somewhat separate from the rest of society, with their own infrastructure, and sub-populations such as faculties. While younger and more educated tend to have more informed beliefs regarding mental illness (Furnham et al., 2016) university students (typically at similar levels of educational achievement and age) still appear to differ from each other in regards to their attitudes towards mental illness. There are fairly consistent findings that there are differences in levels of stigma between different faculties, with social sciences often displaying the least, and technical sciences the most (Furnham, Cook, Martin, & Batey, 2011; Holubova, Prasko, & Klimusova, 2016). If, university populations should be targets for these kinds of interventions, differences within the population need to be determined, as they might suggest a need for faculty-specific strategies.

Summary

Stigma is a significant problem with potentially drastic impacts on the progression, severity, and outcome of depression, along with many aspects of daily life. The stigma of depression should, theoretically, be reduced by people having greater knowledge and familiarity about depression. However, this doesn't appear to be the case.

Large scale strategies have been implemented around the world to try and reduce stigma. While potentially very useful, such initiatives suffer from some limitations: the significant cost and scale could be difficult for smaller organisations to implement, the broad nature of interventions and target populations may limit any potential effects. The research on such strategies lack any control group comparisons, potentially limiting conclusions on efficacy.

University student populations have been identified as potentially ideal target groups for further research on stigma, and stigma-reduction efforts. Research suggests differences between student faculties in attitudes to mental illness. Students overall may differ in familiarity with mental illness, which may contribute to their differences in attitudes. It is important to investigate if differences in familiarity, knowledge, and stigma are apparent, as this might facilitate the implementation of certain forms of stigma reduction strategy in different student groups.

Aim and hypotheses

The aim of this thesis is to investigate levels of depression stigma and literacy in a university student population, comparing of students from three faculties. Another is to investigate the relationship of familiarity with depression stigma, stereotype attributions, and literacy. Of additional interest is to assess the potential effectiveness of brief, low-cost, low-intensity destigmatising strategies specific to depression, across the whole sample. This will involve comparing the effects of three different forms of written material related to depression: (1) educational information contrasting stereotypes of depression with research evidence and scientific facts, (2) personal accounts of the experience of depression, and (3) a combination of 1 and 2, and (4) a control group given irrelevant texts to read.

Hypotheses

- 1) There will be significant differences between the student faculties on initial measures of depression literacy, depression stigma, and stereotype attributions.
- 2) Familiarity with mental illness will relate to lower stigma, and higher literacy in comparison to no familiarity.

- 3) Destigmatising strategies will reduce stigma and increase literacy scores compared to a control group. There are thought to be differences in effectiveness between the strategies.

Method

Participants

Participants were university students from the faculties of Social Sciences, Medicine, and Engineering. Participants were selected by volunteer sampling by responding to posters and advertisements in faculty buildings, and student social media groups.

109 participants in total completed the survey, (30 male, 76 female, 3 not specified) with a mean age of 23.66 (SD = 2.73). Of these, 39 were from social sciences, 36 from medicine and 33 from engineering (one did not disclose their faculty membership.)

Ethical approval for this thesis research adhered to ethical guidelines set by the Swedish Research Council. All participants were provided with relevant information regarding the aim of the research and provided their informed consent. There were no monetary incentives to participate. Participants were informed of their right to withdraw at any time without penalty (Appendix A). There were minimal risks identified to participants, however, given the sensitive subject matter and content of some of the materials, post-participation all were presented with materials and suggestions for further information if they have any concerns about their own/others' wellbeing (Appendix B).

Materials and Procedure

Measures used to assess knowledge of depression, and stigma towards depression, were selected based on the findings of a recent review (Fox et al., 2017). Selected measures were deemed to be more established with data on reliability and validity, and where possible, specific to assessing depression. Where required, all relevant permissions were requested and granted.

All measures were administered and completed as an online questionnaire. The order of completion was determined to attempt to avoid any influence of one measure on responses to another.

Sociodemographic and miscellaneous variables. Miscellaneous items not part of the established measures were selected based on Griffiths, Christensen, and Jorm (2008)

identification of certain factors influencing attitudes, namely familiarity, and awareness of national campaigns. Information on age, gender, and faculty membership was also collected

Scales

The Attribution questionnaire (AQ9) (Corrigan, 2008). A measure of the endorsement of stereotypes towards depression, a key component of stigma attitudes. It consists of 9 items and a vignette altered to describe an individual with depression, instead of schizophrenia (Appendix C). Items were rated on a scale from 1 (not agreeing at all) to 5 (agreeing very much). Previous reliability values range from 0.6-0.96 across all stereotype factors, with test-retest reliability over a week = >0.50 . Validity is moderate, with reasonable correlations with other established stigma measures e.g. desire for social distance = 0.40. In the present study, Cronbach's alpha was 0.52

The Error-choice test (EC) (Michaels & Corrigan, 2013). An implicit measure of stigma thought less susceptible to social desirability. Presented as a knowledge test but designed to assess endorsement of false beliefs around mental illness. Two possible responses to each item are provided, more stigmatising answers are scored as 1, less stigmatising as 0, with total scores ranging from 0-14, higher scores reflecting higher implicit stigma. Wording of original version altered as no depression-specific version available (Appendix D). Test-retest reliability = 0.50-0.70. In the present study, Cronbach's alpha was 0.46.

The Depression Literacy Questionnaire (D-Lit) (Griffiths, Christensen, Jorm, Evans, & Groves, 2004; Gulliver et al., 2012). A self-report assessment of depression knowledge consisting of 22 multiple choice items with 3 possible responses (true, false, don't know). Correct answers scored as 1, incorrect as 0. Higher scores are indicative of higher depression literacy. Internal consistency reasonably high ($\alpha = .70$ ($n = 40$)), with test-retest reliability (over 3 months) of $r = .74$, $p = .02$ ($n = 12$). In the present study, Cronbach's alpha was 0.76

Depression Stigma Scale (DSS) (Personal stigma subscale) (Griffiths et al., 2008; Griffiths et al., 2004; Griffiths et al., 2006). A self-report measure used to measure degree of stigma towards depression. The original measure consists of two subscales – personal stigma and perceived stigma. Each subscale has 9 items. This research used the personal stigma subscale. Responses are given on a five-point scale (1 - 'strongly disagree' to 5 - 'strongly agree'). Higher scores indicate higher levels of depression stigma. Test-retest reliability = $r =$

0.71 (n=435). Internal consistency range of $\alpha = 0.75-0.82$. In the present study, Cronbach's alpha was 0.69.

Experimental manipulation: Destigmatising materials. Participants were randomly assigned to view one of four types of destigmatising material at the mid-point (Appendix E). Participants completed one set of all measures, viewed their assigned materials, and completed another set of measures post-presentation. Each group of materials consisted of three items. The strategy groups were:

1. Education: misconception/stereotype vs. evidence/opinion
2. Personal account: description of an individual, and their first-person experience of mental illness.
3. Combined: misconception/stereotype vs. evidence/opinion, *and* personal account related to this.
4. Control: information about university, and personal accounts of student life
Sourced from Lund University international student prospectus (Ramsten, Lindblad, & Grindlay, 2016).

The destigmatising materials were selected and developed with a focus on addressing typical stereotypes and beliefs related to depression. Prominent myths, stereotypes, and themes of depression were identified in the literature, and through an examination of websites such as the World Health Organisation (WHO) (World Health Organisation, 2018) and Time to Change UK (Time to Change UK, 2018). Personal accounts were created by the researcher, emphasised in the post-completion material presented to all participants (Appendix B).

All statistical analysis was conducted using SPSS v.25. Sample size was retained where possible, with any potential outliers deemed within an acceptable range of the measures. There was some skewness and non-normality observed, however, this was deemed within an acceptable range. Missing data points were infrequent; appropriate case means for that measure were imputed.

Results

Details of the analysis and results are presented in order of the hypotheses they were conducted to assess.

Hypothesis 1: Faculties will differ significantly in their scores of depression stigma, literacy, and stereotype attribution.

The students from the three faculties of social sciences, medicine, engineering, were reasonably similar in terms of gender distribution, recent experience of awareness campaigns, and previous familiarity with mental illness (Table 1). The only discernible difference between the groups in this context was a slightly higher average age in social sciences compared to engineering and medicine, and this mean age difference was significant, $F(2, 105) = 9.572; p = <.001$.

Table 1. Demographics by faculty

	Social Sciences (N= 39)	Engineering (N = 33)	Medicine (N = 36)
Age (SD)	25.10 (2.76)	22.94 (2.52)	22.81 (2.32)
Gender			
Male	10	11	9
Female	27	21	27
Other not specified	2	1	0
Familiarity* (% yes)	71.8%	60.6%	69.4%
Campaign* (% yes)	76.9%	78.8%	83.3%

**Familiarity = previous experience with mental illness. Campaign = recall seeing mental health awareness campaign in past year*

Preliminary analysis of the data indicated low mean scores on the stigma scale across all faculties (see Table 2).

A one-way multivariate analysis of variance (MANOVA) was conducted with faculty as the independent variable, and depression stigma (DSS), attribution questionnaire (AQ9), depression literacy (DLit), and implicit stigma error-choice (EC) measures as dependent variables. In light of the significant age discrepancies between the faculties, age was entered as a covariate. Results showed that age did not have a significant relationship with any of the dependent variable measure, $F(4, 101) = 1.36, p = .25$, Wilks' Lambda = .949, partial eta squared = .05. Results of the analysis comparing faculty mean scores (see Table 2) showed a statistically significant difference between faculties on the dependent variables, $F(8, 204) = 2.61; p = .01$; Wilks' Lambda = .82; partial eta squared = .09. Separately, there was a

significant difference between faculties on AQ9 scores, $F(2, 105) = 4.88$; $p = .009$; partial eta squared = .08; and DLit scores, $F(2, 105) = 4.32$; $p = .016$; partial eta squared = .08.

Post-hoc tests using Bonferroni corrections indicated engineering scores on the AQ9 were significantly greater than social sciences ($p = .017$) and medicine ($p = .031$) (suggesting greater stereotype attribution in Engineering students compared to social sciences and medicine). On the DLit, differences in mean scores were identified as statistically significant between engineering and medicine ($p = .013$).

No statistically significant differences were observed on the other stigma measures (DSS or EC) between any of the faculty groups.

Table 2. Mean scores (SD) of AQ9, DSS, DLit, EC

Faculty	AQ9 ¹	DSS ²	DLit ³	EC ⁴
Social sciences	1.89 (.42)	1.63 (.51)	15.36 (3.27)	4.62 (1.84)
Engineering	2.14 (.41)	1.69 (.44)	13.85 (3.48)	5.15 (1.92)
Medicine	1.90 (.30)	1.68 (.43)	16.31 (3.71)	5.33 (1.69)

¹ Scale of AQ9 was 1-5, 1 = low stereotype attribution and 5 = high stereotype attribution, ² Scale of DSS was 1 – 5, 1 = low stigma and 5 = high stigma, ³DLit scale from 0-22, 0 = low literacy, 22 = high literacy, ⁴EC scale is 0-14, 0 = low implicit stigma, 14 = high implicit stigma

Hypothesis 2: Those familiar with mental illness will display higher literacy scores, and lower stigma and stereotype attribution scores compared to those who are not.

The whole sample (N = 109) was categorised according to familiarity with mental illness, those who were familiar (N = 73, mean age = 23.84, $SD = 2.63$), and those who were not familiar (N = 36, mean age = 23.31, $SD = 2.95$).

An analysis of variance (ANOVA) was conducted with familiarity as independent variable, and scores on the depression stigma scale (DSS), stereotype attribution (AQ9), depression literacy (DLit), and the error-choice (EC) measures as dependent variables (Table 3). The analysis demonstrated significant differing scores on one or more of these measures, $F(4, 104) = 3.69$, $p = .007$; Wilks' Lambda = .875; partial eta squared = .125.

Those familiar with mental illness scored higher on DLit, $F(1, 107) = 13.34$; $p < .001$; partial eta squared = .011 than those not familiar. The two groups differed on DSS, $F(1, 107) = 3.97$; $p = .049$; partial eta squared = .036, with familiar scoring lower than not familiar, indicative of average lower stigma in the familiar group. Stereotype attribution assessed by the AQ9 also indicated group differences $F(1, 107) = 4.20$, $p = .043$; partial eta squared = .038. In this instance, familiar scored lower (indicative of less stereotyping) than those not familiar.

No significant differences were found between the two groups on the EC implicit stigma measures, $F(1, 107) = .23$, $p = .63$

Table 3. Mean scores (SD) of AQ9, DSS, DLit, EC by familiarity

Familiarity	AQ9 ¹	DSS ²	DLit ³	EC ⁴
Familiar	1.92 (.36)	1.61 (.43)	16.03 (3.10)	4.99 (1.67)
Not familiar	2.09 (.44)	1.79 (.49)	13.50 (3.92)	5.17 (2.15)

¹ Scale of AQ9 was 1-5, 1 = low stereotype attribution and 5 = high stereotype attribution, ² Scale of DSS was 1 – 5, 1 = low stigma and 5 = high stigma, ³DLit scale from 0-22, 0 = low literacy, 22 = high literacy, ⁴EC scale is 0-14, 0 = low implicit stigma, 14 = high implicit stigma

Hypothesis 3: Destigmatising strategies will lead to changes in literacy, stigma and stereotype attribution scores.

A comparison of the four different destigmatising strategy conditions (education, personal accounts, combination, control) was conducted to assess the effect of these conditions on changes in scores of depression stigma (DSS), stereotype attributions (AQ9), and depression literacy (DLit) scores from before to after their presentation. All four condition groups were similar in age, gender, and familiarity distribution. Multivariate analysis of variance (MANOVA) were conducted on the condition groups at time 1 and time 2 to assess any differences on any of the dependent variables. Repeated measures t-tests were used to assess the significance of changes in scores on each dependent variable in each condition. This method was selected over the more complex mixed models/repeated measures

MANOVA, due to concerns about data not meeting the more stringent assumptions of such tests, and the impact on the validity of any results obtained from such analysis.

Preliminary multivariate analysis of variance tests indicated no significant differences between the four groups on the measures before the experimental manipulation (Time 1), $F(12,270) = .874$; $p = .574$; partial eta squared = .03. Additional testing identified the presence of group differences at Time 2 (after experimental manipulation), $F(9,250) = 1.94$; $p = .04$; partial eta squared = .053, and that these group differences were specifically for the AQ9 measure, $F(3, 30) = 3.35$, $p = .022$; partial eta squared = .087. Post hoc Bonferroni corrected tests indicated that it was the control (and combination conditions that differed most at Time 2, at $p = .029$.

Repeated measures t-tests were conducted in the four assigned conditions (education, personal accounts, combination, control) to assess changes in scores on the DSS, AQ9, and DLit from before to after the materials were presented. All but the control condition showed overall decreases in stigma scores on the DSS (see Table 4), at varying degrees of significance, with personal accounts and combination conditions showing the most significant changes.

Table 4. Depression stigma scale (DSS) scores and t-test results by condition

Condition	DSS Time 1		DSS Time 2		<i>t</i>	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>df</i>		
Education (N = 27)	1.75 (.57)	1.64 (.50)	26	2.134	.042	
Personal Accounts (N = 27)	1.72 (.50)	1.56 (.34)	26	2.856	.008	
Combination (N = 26)	1.67 (.32)	1.54 (.30)	25	3.532	.002	
Control (N = 29)	1.54 (.46)	1.49 (.41)	28	1.786	.085	

(DSS scale from 1-5, 1 = low stigma, 5 = high stigma)

All conditions showed decreases from time 1 to time 2 on the AQ9 scores (Table 5). On the AQ9, the two groups to show evidence of the most significant change were personal accounts, $t(26) = -3.749$, $p = .001$; and the control group, $t(28) = -4.530$, $p = <.001$.

Table 5. Attribution questionnaire (AQ9) scores and t-test results by condition

Condition	AQ9 Time 1	AQ9 Time 2	<i>df</i>	<i>t</i>	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>			
Education (N = 27)	2.02 (.47)	1.84 (.37)	26	3.192	.004
Personal Accounts (N = 27)	2.02 (.37)	1.88 (.25)	26	3.749	.001
Combination (N = 26)	2.01 (.37)	1.92 (.39)	25	2.496	.019
Control (N = 29)	1.86 (.37)	1.66 (.29)	28	4.530	.000

AQ9 scores 1-5, 1 = low stereotype attribution, 5 = high stereotype attribution

Only the combination strategy approached significance in terms of a change in depression literacy scores (DLit) ($p = .052$) (see Table 6)

Table 6. Depression Literacy (DLit) scores and t-test results by condition

Condition	DLit Time 1	DLit Time 2	<i>df</i>	<i>t</i>	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>			
Education (N = 27)	14.15 (4.21)	13.96 (3.86)	26	0.708	.485
Personal Accounts (N = 27)	15.48 (3.13)	15.74 (3.04)	26	-0.838	.410
Combination (N = 26)	14.77 (3.17)	15.54 (3.36)	25	-2.038	.052
Control (N = 29)	16.28 (3.53)	16.31 (3.77)	28	-0.162	.873

DLit scores from 0-22, 0 = low literacy, 22 = high literacy

Discussion

Results lend support for the notions of faculty differences in literacy and stigma of depression, and familiarity's relationship with reduced stigma and improved literacy. There is also some support for the potential efficacy of brief written destigmatising strategies used in this population.

Faculty Differences in Stigma Related Measures

There were some statistically significant differences between engineering students and medical and social sciences students on measures of stereotype attribution and depression literacy. Interestingly, while previous research does suggest that those in technical sciences may display more stigmatising attitudes, and less knowledge overall (findings which are somewhat supported here), this is often framed only in relation to the social sciences (Holubova et al., 2016). In this sample, the key and greatest differences were not just between engineering and the social sciences, in fact one of the most significant differences was between engineering students and medical students, who scored higher on depression literacy than both other faculties.

It is likely that any who participated in this research, regardless of their academic background, would already have an interest in mental illness, and perhaps greater knowledge of such, potentially limiting more significant variation between faculties on stigma. However, some differences between faculties remain. It is interesting that these observed differences in depression literacy were not accompanied with significant differences on depression stigma, only stereotype attributions. This is somewhat in line with research documenting that despite the increased knowledge in today's society, levels of stigma are generally unchanged (Angermeyer, Matschinger, Carta, & Schomerus, 2014), and suggests that there is more than knowledge at work in shaping stigma. Perhaps literacy has more of a relationship with stereotyping than stigma itself. The low level of stigma observed in this sample overall, with the mean score on the depression stigma scale being 1.67 (and the lowest possible score on this measure being 1) may provide some insight into the lack of faculty differences on this measure. It appears that in this sample at least, faculty differences in stigma itself are not apparent, though stereotypes and literacy differences are.

Familiarity and Stigma Related Measures

Familiarity appears to be related to statistically significantly higher depression literacy, and lower stigma and stereotype attribution. This seems a fairly conclusive and intuitive finding, since it is possible those who have some previous experience of mental illness will likely have had more opportunity to develop their knowledge and have any misconceptions/stereotypes disrupted. Previous research suggests that lower familiarity relates to increased stigma (Crowe et al., 2016). What is interesting is that the differences between familiar and not familiar groups found on most of the measures didn't extend to the

implicit stigma measure. This suggests that perhaps, despite previous experiences, those in the familiar group may still hold implicit misconceptions towards depression on some level. It is possible that some previous experience was negative, and perhaps formed some implicit stigma attitudes. It is difficult to assess reasons why this might be the case based on the data available here, and what influence this might have.

What this information also shows, is that overall more students in this sample have experience with mental illness in some form than don't. It is entirely possible that this high level of familiarity observed across the whole sample, and in each of the faculties, influenced findings, given previous research suggesting the benefits of increased familiarity with mental illness on improving attitudes (Sowislo et al., 2017). This could also have potential implications for stigma research going forward, and impact on the utility of attempts to reduce stigma itself based on notions of increasing familiarity, if this is already high.

Effectiveness of De-stigmatising Strategies

Brief written destigmatising strategies were theorised to potentially be a useful tool in the destigmatising strategy arsenal, given potential limitations and difficulties documented with large scale approaches (Quinn et al., 2014). The findings here, while lending support to the potential for brief, written strategies, are not conclusive. However, they do support the potential utility in such approaches, and the findings of previous research suggesting brief strategies in other forms can be effective (Atal et al., 2017; Hackler et al., 2016).

On the depression stigma scale (DSS), all conditions apart from the control group showed the expected decreases in reported stigma attitudes, with the most significant changes in the personal accounts and combination conditions. This seems to support previous findings of other strategies that advocate the use of personal accounts/experiences in reducing stigma, and the potential additional benefit of combining personal experiences with other evidence or educational information (Dijker & Koomen, 2003; Lauber et al., 2004; Stefanek, 2017).

On the stereotype attribution (AQ9) measure, all conditions showed a reduction in scores of stereotype attribution, but in this case, the most significant changes appeared in the personal accounts and, more surprisingly, the control group. It is possible that the first-person, personal nature of the personal accounts facilitated a disruption of previously held stereotypes, as was its intention. The results from the control group however, requires further exploration.

It is possible that the cause of such dramatic change in the control group lies in the materials that were presented. While the materials in the group designated as ‘control’ was designed to be as neutral as possible, the content on university and student life may have promoted more ideas of inclusivity, and influenced general stereotype attributions, resulting in the observed changes in stereotype attributions specific to depression. Despite some previous findings suggesting that stereotypes may be harder to change (Norman et al., 2008; Pescosolido, 2013), these results suggest that it may actually be more beneficial to look at stereotyping attitudes in general, and potentially base de-stigmatising strategies around this. This sentiment is echoed by others in the field suggesting stereotypes are potentially a more fruitful area of destigmatising interventions (Scheid & Wright, 2017).

While attempts were made to make all materials similar in style, and amount of content, it is possible that the control group material was simply less taxing. The significant amount of information, particularly in the combination group, may have given rise to ‘protest’ effects, that have been identified as a problem in previous research (Rüsch et al., 2005), with participants feeling admonished, and fatigued, limiting any potential change in attitudes. Despite these potential limitations in some of the strategies, overall, the personal accounts materials were most effective at significantly reducing both stigma *and* stereotype attributions.

Methodology and Sample Limitations

Limitations with self-report attitudinal measures are well known in the field, though the inclusion of an implicit measure of stigma was an attempt to assess the potential influence of social desirability. While social desirability may be an important factor, one can’t rule out the potential of the multitude of measures used influencing responses to each other. In relation to the effects of destigmatising strategies, the information in these measures could have had effects on participants even before the texts were presented, influencing their potential impact and preventing a more detailed assessment of the effectiveness of each of the strategies. The short period of time between measures completed at time 1 before and time 2 after the materials were presented may have contributed to some carryover effects. Possible group differences not accounted for here may also have had an influence.

With regards to the sample itself, findings may have been influenced by the gender makeup, while the distribution of gender was similar between all observed groups, the majority of the sample was female. While gender differences on measures were not apparent

here, according to a one-way analysis of variance, that found no significant gender differences (Male, $M = 1.78$, $SD = .42$; Female, $M = 1.63$, $SD = .48$), $F(2, 106) = .72$, $p = .49$, previous research suggests that gender differences may exist in attitudes to mental illness and treatment-seeking (Chandra & Minkovitz, 2006), and should be investigated further in future. This combined with the overall high rates of familiarity, recent campaign awareness, and the overall sociodemographic makeup of this sample population, may go some way to accounting for the relatively low rates of stigma in this sample as a whole.

Research Contribution

This particular research contributes a more nuanced understanding of the differences in stigma related attitudes between university faculties, suggesting that it is possible they are not as significantly different as previous research may have suggested, though literacy and stereotype differences may still exist, and may prove useful avenues for future education strategies. Overall, it seems that stigma in this sample is low, and familiarity with mental illness is high, which is quite a positive finding, suggesting that there may be more open and accepting attitudes in these participants. This research also suggests that stereotype attributions towards mental illness may be more prominent and easier to detect than stigma itself, and perhaps more amenable to change as part of future strategies, even brief ones. Brief and low-intensity strategies can be effective, with support for the inclusion of personal accounts and experiences of mental illness at the forefront of these strategies.

Future Research

Future research should investigate in more detail the potential long-term impact of brief destigmatising strategies used in this study, using longitudinal methods and more frequent follow-ups to see if changes observed here are maintained over time. In addition, while difficult, more research needs to be done on investigating if and how de-stigmatising strategies promote actual behaviour change or intended behaviour change. Since overt behavioural discrimination is not as acceptable and may not be prominently displayed, more creative investigation methods may need to be employed. Related to this, is the need to develop and implement more implicit measures of stigma, to try and remove as much social desirability from the current methods as possible. One continuing problem in much of this research that is yet to be adequately solved is attracting participants who, because of their attitudes or views of mental illness, would likely not be interested or volunteer for such research; though they may actually be ideal participants for investigating stigma and

destigmatising strategy efficacy. Identifying and finding ways of involving these groups in research should be a key aim in future.

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APPENDIX A**Information for participants**

“Thank you for your interest in this research project.

Participation will involve the completion of questionnaires, and the viewing of written materials related to mental health/student life, and university.

This is expected to take approximately 15 minutes.

Your participation is entirely voluntary, you are free to withdraw your consent and participation, without a specified reason or any penalty, simply by exiting the survey at any time. Any and all information you provide by completing the survey will be anonymous and stored securely. If you have any concerns, questions, or difficulties please contact *[researcher name and email]*”

APPENDIX B

Post-participation information

“Thank you for participating in this research project, it is greatly appreciated.

If you have any additional questions or concerns regarding the research, do not hesitate to contact: *[researcher name and email]*

The situations, themes, thoughts, and feelings, of any and all personal accounts you may have been shown, were *based on* accounts sourced from across the internet, however, the final accounts were created by the research team to reflect common experiences. All names and ages are fictionalised, and any similarity with real life individuals are coincidental.

Information regarding Lund University was sourced from the 'Lund University International Student Prospectus 2017/18'

If you would like more information, and the help available to you in Sweden's healthcare system: <https://www.1177.se/Skane/Tema/Psykisk-halsa/>

If you are concerned about mental health and your studies, Lund University can offer advice and support via the student health centre:

<https://www.lunduniversity.lu.se/current-students/health-care/student-health-counselling>”

APPENDIX C**Attribution Questionnaire (AQ9) (Corrigan, 2008) depression-specific vignette, and reverse scored item**

Please read the following story about a student with depression.

"Harry is a 24 year old student. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. Harry doesn't feel like eating and has lost weight. He can't keep his mind on his studies and puts off making any decisions. Even simple, day-to-day tasks seem too much for him. Harry feels he will never be happy again and sometimes believes others would be better off without him."

Item 7: "How likely is it that you would help Harry? – 1: not at all, 5: very much"
(Higher score here would indicate lower negative stereotyping)

APPENDIX D**Adapted error-choice questionnaire (Michaels & Corrigan, 2013): *only* items specifically referencing schizophrenia changed to depression.**

“Item 1: One type of psychotherapy, cognitive-behavioural therapy, has been shown to reduce the symptoms of *depression* [True/False]

Item 2: Considering people with *depression*, what is the average number of separate hospitalisations for their mental illness over a one-year period of time? [4 or more/2 or less]

Item 4: People with *depression* should be allowed to use an online dating service [True/False]

Item 5: People with *depression* make up what percent of the homeless population? [5%/25%]

Item 6: Adolescents with *depression* are frequently absent from school [True/False]

Item 8: People with *depression* benefit the least from services like psychotherapy [True/False]

Item 9: People with *depression* are likely to steal from their family members [True/False]

Item 10: Based on the capabilities of people with *depression*, school counsellors should recommend job-training programs rather than the regular curriculum [True/False]

Item 13: A person with *depression* is capable of being a physician or medical doctor [True/False]”

APPENDIX E

Written materials presented to participants (Ramsten et al., 2016; Time to Change UK, 2018; World Health Organisation, 2018)

Condition 1 Education group materials

- 1) "Only certain types of people get depression. These types of people can't deal with the normal stresses of life, or lead a lifestyle that causes their depression."

Depression affects over 300 million people worldwide, from all walks of life. Some may be more at risk because of extreme life circumstances, but it can affect anyone. Depression is a complex interaction of social, psychological and biological factors. For some it may be a result of significant life stresses or events, for others there may be no such obvious cause.

Depression can have a significant effect on people's lifestyle, affecting sleep habits, appetite, and level of activity, that can worsen depression itself, causing a cycle of negative thoughts, feelings, and behaviours that can be difficult to get out of. While, objectively, an individual is not to blame, they may blame themselves because of the difficulties they face in functioning

- 2) "Depression is just sadness, everybody gets depressed sometimes. People should just do things that make them feel happy."

While 'depressed' is often used as another word for 'sad', and they shouldn't be thought of as the same thing. Sadness is a regular emotional response to challenges that life often presents, and often has a clear cause. While it can be difficult, is often temporary, and mood stabilises fairly quickly. Depression is often persistent, with no single identifiable life event.

Depression is not just sadness, but also a loss of motivation or interest in previously enjoyable activities, with feelings of hopelessness, guilt, and often anxiety.

People diagnosed with depression often lose motivation to keep active, or look after themselves, making them feel more hopeless and often guilty. In some cases, people may use alcohol or illicit drugs to numb their feelings, which often makes things worse.

- 3) "Is depression a real illness? If people can hide it, go to work/school, there must be some choice or control involved."

People with depression speak of 'wearing a mask' because of worries about the negative judgements of others, so can from the outside seem to be functioning well. Pretending in this way can feel isolating, potentially worsening the condition. Talking to others is extremely beneficial, but fear of negative reactions often prevents this, and can stop people seeking help and treatment, and withdrawing from others.

Depression can worsen life expectancy through its interactive relationship with physical health and lifestyle. In the worst cases, depression is a direct cause of death, via suicide, which is a prominent cause of death in certain age groups, particularly in those aged 15-29.

Depression requires medical advice and treatment, but there are many different kinds, and not all are as effective for everyone. Medications can have side effects, it can take time to find one that works. Talking therapies, counselling, and cognitive behaviour therapy can be useful in changing negative thought patterns, but take time and effort.

Condition 2 Personal accounts materials

- 1) "I had a relatively easy life growing up, so in my deepest depression, I mostly felt guilty for feeling as bad as I did, when people are suffering all over the world. I didn't have a 'reason' to be depressed, there wasn't one, this scared me and made me feel even worse" - (Charlie, 21)

"I've already been prescribed 3 or 4 different antidepressants, a lot of them made me feel worse. It can feel like a guessing game at times. With the most recent one, I feel a bit more like the old me. While not as constant, the negative thoughts still linger. Medication helps, but for me on its own can't completely take that away. I know of others who benefit more from counselling and talking therapy, that helps them know how to manage the negative thoughts and feelings better. I know it's different for everyone." - (Maria, 26)

- 2) "I had felt sadness before, but this was different. There was sadness, its true, but mostly there was...nothing, it was just emptiness. I was scared if I talked to people they might ask why I was depressed, and I wouldn't have an answer." - (Ali, 19)

"Remembering who I used to be before I developed depression, is painful. I was always very social and extroverted...not anymore. I would make excuses to others, blaming it on being ill in some other way. I felt empty. Trying to force a smile when with friends, but feeling terrible inside, wanting to tell anyone how I was feeling. I can't will myself to be happy on my own. Perhaps talking to a doctor, getting help, the happiness I used to feel will come back, but I can't get there straight away, not on my own." - (Chris, 25)

- 3) "I never wanted to be depressed, I never wanted that label, I suffered silently for years not wanting others to think negatively or judge me. I pretended, I smiled, I went to classes, to work, I spoke to others and nodded along politely, all the while like my brain was swimming in a fog." - (Alex, 23)

"I was always active. My body was reasonably healthy and then all of sudden, my mind suddenly wasn't. I got no sleep, , worrying about every wrong thing I thought I'd ever done, so I had no energy to face the day. I didn't go out, didn't go to the gym, barely ate, because I didn't see the point. I'd never been a lazy person but now I felt lazy, like I was failing at life, failing at being myself." - (Jo, 20)

Condition 3 Combination group materials

- 1) "Only certain types of people get depression. These types of people can't deal with the normal stresses of life, or lead a lifestyle that causes their depression."
 Depression affects over 300 million people worldwide, from all walks of life. Some may be more at risk because of extreme life circumstances, but it can affect anyone. Depression is a complex interaction of social, psychological and biological factors. "I had a relatively easy life growing up, so in my deepest depression, I mostly felt guilty for feeling as bad as I did, when people are suffering all over the world. I didn't have a 'reason' to be depressed, there wasn't one, this scared me and made me feel even worse." - (Charlie, 21)
 "When deep in my depression, I got no sleep, worrying about every wrong thing I thought I'd ever done, so I had no energy to face the day. I didn't go out, didn't go to the gym, barely ate, because I didn't see the point" - (Jo, 20)
- 2) "Depression is just sadness, everybody gets depressed sometimes. People should just do things that make them feel happy."
 While 'depressed' is often used as another word for 'sad', and they shouldn't be thought of as the same thing. Sadness is a regular emotional response to life events,

that is temporary, and often has a clear cause. It is often temporary. Depression is more persistent, often with no single identifiable cause. It is not just sadness, but also a loss of motivation or interest in previously enjoyable activities, with feelings of hopelessness, guilt, and often anxiety.

"I had felt sadness before, but this was different. Mostly there was...nothing, it was just emptiness. I was scared if I talked to people they might ask why I was depressed, and I wouldn't have an answer." - (Ali, 19)

"I was always very social and extroverted...not anymore. I would make excuses to others, blaming it on being ill in some other way. I felt empty. Trying to force a smile when out with friends, which I used to enjoy doing, but feeling terrible inside." - (Chris, 25)

- 3) "Is depression a real illness? If people can hide it, and go to work/school, there must be some choice or control involved. "

People with depression speak of 'wearing a mask' because of worries about the negative judgements of others, so can from the outside seem to be functioning well. Depression can worsen life expectancy, even affecting physical health. In the worst cases, resulting in suicide, a prominent cause of death in younger adults.

Like any illness, depression requires medical advice and treatment, they are largely effective, but different people require different treatments.

"I've already been prescribed 3 or 4 different antidepressants. It can feel like a guessing game at times. With the most recent one, I feel a bit more like the old me. While not as constant, the negative thoughts still linger. Medication helps, but for me on its own can't completely take that away. I know of others who benefit more from counselling and talking, that helps them to manage the negative thoughts and feelings better. I know it's different for everyone." - (Maria, 26)

Condition 4: Control group materials (Ramsten et al., 2016)

- 1) Lund University Vision: "A world-class university that works to understand, explain and improve our world and the human condition"(Ramsten et al., 2016, p. 4)

Lund University has over 100 different degrees and 100's of stand-alone courses, taught in English. (Ramsten et al., 2016, p. 4)

"I always wanted to study in a Scandinavian country. Sweden has a reputation for some of the highest standards of living across the world, and it's easy to see why. The

cost of living is a little bit high, and was quite a shock at first, but with the right budgeting that's not too much of a problem anymore." - (Charlie, 21)

- 2) Lund University was officially established in 1666, making it one of the oldest education institutions in Scandinavia. Over 100 nationalities are represented in the students studying at Lund. (Ramsten et al., 2016, p. 4)
- 3) "Lund University has a great reputation, as shown by the amount of students from all across the world. The university environment is quite relaxing. The workload can be a little high and intense sometimes, but that's to be expected at this level, I think. I like that there are plenty of opportunities to get involved in all the nations and societies, when I need a break from studying." - (Alex, 23). Lund University is made up of eight faculties and multiple research centres and institutes.

Lund University, outside of its main campus, has campuses in Helsingborg (e.g. service management, communication, social work), and Malmo (medical research and training). (Ramsten et al., 2016, p. 13)

"I chose to study at Lund because of the emphasis on creativity in theory, research, and the development of wider applications and innovations, particularly in technology and medicine. Living in Sweden is quite a change from what I'm used to. It might be a little too quiet for me to be honest, but there is always Malmo or Copenhagen nearby" - (Chris, 25)