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PUBLIC BELIEFS ABOUT CAUSE AND RISK OF DEPRESSION IN ICELAND: A PILOT STUDY

ABSTRACT

The aim of this pilot study was to explore attitudes of the Icelandic public towards causes and risks of depression. A cross-sectional survey was conducted, employing a questionnaire and a vignette of a person with depression. A convenience sample of 100 people was used with a response rate of 85%. Data was analysed using descriptive statistics and nonparametric tests. Overall, the participants perceived both causes and risks to involve genetics, personality traits and lack of coping strategies. The belief in the importance of social stressors as a cause and risk factor of depression was predominant. Problems from childhood and day to day problems were considered to be the most likely causes of depression, but unemployment, being divorced and belonging to a low socioeconomic group the most likely risk. Factors that generally imply negative attitudes towards a person with depression were also seen as a likely cause. Public beliefs about mental health issues provide important information which can be used to promote mental health and develop services, in order to tackle depression as a public health issue.

Keywords: Public beliefs, depression, causes, risks.

ÚTDRÁTTUR

Geðrænir sjúkdómar, líkt og þunglyndi, eru taldir ein stærsta lýðheilsuáskorun í Evrópu þar sem gera má ráð fyrir að einn af hverjum fjórum finni fyrir einkennum þunglyndis einhvern tíma á ævinni. Algengi örorku vegna geð- eða hegðunarröskunar fer vaxandi á Íslandi og að sama skapi notkun þunglyndislyfja. Rannsóknir á viðhorfum fólks til heilsu og sjúkdóma getur gefið mikilvægar upplýsingar um hvaða skilning almenningur leggur í ýmis heilsutengd málefni. Að sama skapi geta hugmyndir fólks um orsakir geðræns vanda gefið vísbendingar um hvort og þá einnig hvert fólk leitar eftir faglegri aðstoð og hvaða augum það lítur einstaklinga sem greinast með geðsjúkdóm. Í þessari grein er forrannsókn á viðhorfum Íslendinga til orsaka- og áhættuþátta þunglyndis lýst. Gögnum var safnað með spurningalista sem þátttakendur brugðust við eftir að hafa lesið stutta lýsingu á einstaklingi með þunglyndi. Notað var 100 manna hentugleikaúrtak og svarhlutfallið var 85%. Lýsandi tölfræði var beitt við greiningu gagna og óstikuð próf notuð til að bera saman breytur. Almennt töldu þátttakendur orsaka- og áhættuþætti vera margþætta og tengjast erfðum, skorti á bjargráðum og persónueinkennum. Félagslegir streituvaldar voru þó álitnir eiga stærstan þátt í þunglyndi en á ólíkan máta. Þannig voru streituvaldar eins og erfiðleikar í barnæsku og vandi í daglegu lífi, taldir líklegustu orsakaþættirnir, en það að vera atvinnulaus, hafa skilið eða slitið sambúð og tilheyra tekjulægsta samfélagshópnum líklegustu áhættuþættirnir. Atriði sem almennt fela í sér neikvæð viðhorf til þess sem er þunglyndur voru einnig metin sem líkleg orsök. Viðhorf almennings til orsaka- og áhættuþátta þunglyndis gefa mikilvægar vísbendingar sem geta nýst til að efla geðheilbrigði, þróa þjónustu við hæfi bregðast við þunglyndi sem lýðheilsuvanda.

Lykilorð: Viðhorf almennings, þunglyndi, orsök, áhætta.

INTRODUCTION

Mental health issues, including depression, have been identified to be one of the greatest public health challenges in Europe. These issues are the main cause of disability and early retirement and a great burden to economies (World Health Organization [WHO], 2013). Depression is a common disease, affecting about 121 million people worldwide, or about one in four persons at some point in life (WHO, 2005; 2006). Among the twenty global leading causes of burden of disease, unipolar depressive disorders list as third (WHO, 2008). The expenditures on disability pensions and services have been growing for European countries, with the average spending of 2.1% of gross domestic product (GDP) (Thorlacius, Stefansson, Olafsson, and Tomasson, 2010). This is in accordance with the report from the Organization for Economic Cooperation and Development (OECD) on significant increase in consumption of antidepressants since 2000 (OECD, 2013).

Depression is defined by the ICD-10 as Depressive Episode (WHO, 2004) and by the DSM-5 as Major Depression, specified according to severity (mild, moderate, severe) and course (single, recurrent) (American Psychiatric Association, 2013). The symptom criteria for depression are depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy and poor concentration. Depression is considered to result from a complex interaction of social, psychological and biological factors (WHO, 2016). Some argue that depression shows a very strong social class profile (Gomm, 1996). Health care services, which are dominated by medical professionals (Tones and Green, 2004), have been criticized for focusing primarily on the effects and not the causes of health problems. Claims have been made that the construction of disease is made by corporations rather than best practise, reflecting the power that companies have in the health care service, with profit as a key goal (Moynihan, Heath and Henry, 2002; Pringle, 2006). Mechanic (2008) points out that due to lack of consensus on the concept, psychiatrists, mental health workers and the public in general, disagree about the appropriate criteria for mental diseases.

Investigating the health beliefs of the general public can give useful insights into how health and diseases are commonly perceived and understood (Tones and Green, 2004). Beliefs about causes of mental issues are important since these can be a determining factor of whether professional help is sought and acted on and how the general public views people who are dealing with mental issues (Angermeyer, Matschinger and Riedel-Heller, 1999; Haslam, 2007; Jorm, 2000). According to Tones and Green (2004) public knowledge is interwoven in day to day experience of individuals and communities and their cultural understandings of real lives. Public beliefs are shaped by observations, discussions and through the media. They are transmitted by family and friends and influence how individuals define and act upon symptoms and life crises. Stigma towards people with mental illness is well known (Goffman, 1963). Findings of a systematic review and a meta-analysis suggest that attitudes towards mentally ill people have even become increasingly negative and that this is related to an increase in the public understanding of illness within the genetic model (Schomerus et al., 2012).

There are many ways to investigate public perspectives on mental health matters. For the last 20 years, population studies on attitudes and beliefs about mental health, either general or specific diseases, have mostly been cross-sectional reports on single surveys. Several studies are based on a case vignette of a person. Study participants are e.g. asked about recognition of the disorder described in the vignette, possible outcome of various treatments, risk factors and causes, and beliefs associated with discrimination and stigma (Reavley and Jorm, 2012; Schomerus et al., 2012). According to Atzmüller and Steiner (2010) the use of vignette technique with a traditional survey, in quantitative research, can be a powerful tool for causal investigations of respondent judgment. In Australia three large national population surveys have been conducted to measure public beliefs on depression. All studies were based on a vignette describing a clinically depressed person, using a structured interview form (Jorm, Blewitt, Griffiths, Kitchner and Parslow, 2005; Jorm, Christensen and Griffiths, 2005; Jorm et al., 1997; Reavley and Jorm, 2012). In the last two studies effort was made to repeat the

methodology of the first one in order to measure changes over time (Reavley and Jorm, 2012).

Findings from various studies indicate that the general public in high income countries regards depression more often as caused by the social environment rather than biological factors (Jorm, Christensen and Griffiths, 2005; Lauber, Falcato, Nordt and Rössler, 2003a). Furthermore, people seem to be holding a negative view of medical care, not believing that health professionals are helpful in the treatment of depression (Angermeyer et al., 1999; Jorm, Christensen and Griffiths, 2005; Jorm et al., 1997). Results from a survey conducted in Switzerland show that stress, originating mostly from the situation within the family or partnership, was identified as a main cause for depression. Occupational stress was thought to be the second most likely determinant and unspecific future stress the third. Other possible factors such as traumatic events were also mentioned (Lauber, Falcato, Nordt and Rössler, 2003b). Even though the social environment has been identified as a common cause, two studies conducted in Australia in 1995 and 2003-2004, report a rise in beliefs in genetic causes. Increasingly the public seems to believe that both genetics and social factors play a role in depression (Jorm, Christensen and Griffiths, 2005).

A perspective that also has to be considered is the mental health literacy of the public. Jorm, Christensen and Griffiths (2005) stated that even though effort has been made to improve public literacy its focus has not been on cause but instead on disease recognition, treatment available and the advantage of help-seeking. Dumesnil and Veger (2009) claim that while public educational campaigns are recommended e.g. by WHO, findings on the effects, suggest only a small improvement in the knowledge of and attitudes towards depression. Schomerus et al. (2012) however, report increased mental health literacy among the general public particularly towards the genetic model of mental disease although this does not seem to result in better social acceptance of persons dealing with mental health issues.
In Iceland depressive disorders top the Disability adjusted life years' list (WHO, 2006) and it is estimated that 15-20% of all Ice-

landers can expect to become depressed at some time in their life (Directorate of Health, 2013a). The government expenditure on disability for the year 2013 was 2.8% of GDP according to the Classification of the Functions of Government (Statistics Iceland, 2014). Mental health issues count as the main reasons for disability pension in the country in 2012, or by 37.1% (Ministry of Welfare, 2012; Social Insurance Administration, 2013). There are reports of rise in the numbers of mental and behavioural disorders as the primary diagnosis among new recipients of disability pension (Thorlacius et al., 2010). Among the OECD countries Iceland had the highest consumption of antidepressants in the year 2011 (OECD, 2013). An Icelandic biopharmaceutical company that develops diagnostics and drugs for common diseases with human genetic researches has asked for participation of the whole nation and published positive results (deCODE genetics, n.d.). The impact of this emphasis on genes and curing health matters with medication has on the public can only be assumed, but has yet to be acknowledged. On the other side, two national public campaigns have been launched over the years with the aim to educate the public, fight stigma, increase help seeking and encourage people to reinforce themselves. One targeted mental health promotion in general (Directorate of Health, 2013a) and the other targeted depression specifically (Directorate of Health, 2013b).

Limited knowledge is available on the public view of depression in Iceland. The study disseminated in this article investigated public beliefs concerning causes and risks of depression in Iceland in order to identify possible inhibitors to seeking professional help for a mental disorder. The study was carried out as a part of a larger health promotion and public health study (Sonja Stelly Gústafsdóttir and Angela Scriven, 2009).

METHOD
Participants
The survey was conducted in Reykjavík, Iceland in the year 2008. A convenience sample of 100 people was drawn from people using the capital's most attended public swimming pool, with more than 500.000 guests every year. Attending public swimming pools is a popular activity among Icelanders and plays a vast role in the culture.

It has been estimated that every person in Iceland visits a swimming pool on average 15 times each year. The swimming pools are used by all age groups. Various exercise programs are offered, for example swimming gymnastics for senior citizens and special programs for parents and infants (Orkuspárnefnd, 2005). Thus people who attend swimming pools can be considered to be relatively descriptive for the Icelandic public. Inclusion criteria for participation in this study was to be at least 18 years old, having lived in Iceland for five years or longer and be able to speak and read Icelandic.

Instrument
Data was collected using a questionnaire based on a case vignette describing a person, satisfying the diagnostic criteria for major depression (see Box 1). The vignette and the questionnaire were designed by the researcher and inspired by and based on an Australian research performed by Jorm, Christensen and Griffiths (2005). Their work was chosen as an exemplar as it met the aims of the current study. Following permission from the author the vignette and the questions used were translated to Icelandic. Some adaptations had to be made in order to fit Icelandic circumstances for example, in the question on traumatic events as a cause for depression "natural disasters" was used instead of "bushfire". The questionnaire was proof read by a specialist in the Icelandic language. It had an introductory statement that emphasised that many people in Iceland suffer from similar health matters as the person described in the vignette. All questions, except on demographics, were to be answered on a five option nominal scale.

The questionnaire consisted of three demographic questions (age, gender, and level of education), nine on causes of depression and seven on risk factors. Four categories of causes were investigated: biological, genetic, stress or social environment related and person related. All causal categories, except the genetic, included subgroups as illustrated in table 2. Risk factors categories were five: gender, age, social economic status, employment and relationship status. Two categories had subgroups (see table 3). Participants were asked to read the vignette and rate possible causes for the problems being described, and whether some people in the community were more likely to have

these problems than others. An example of a cause related question was: "Could day-to-day problems such as stress, family arguments, difficulties at work or financial difficulties be a reason for these sorts of problems?" An example of a risk related question was: "Do you think that women would be more or less likely than men to suffer these sorts of problems?"

Box 1. Vignette used in the questionnaire.

This is a fictitious description and not based on a real person:
A 30 year old person has been feeling unusually sad and miserable for the last few weeks. Even though the person is tired all the time, he/she has trouble sleeping nearly every night, doesn't feel like eating and has lost weight. The person can´t keep his/her mind on his/her work and puts off making any decisions. Even day-to-day tasks seem too much for the person. This has come to the attention of his/her boss who is concerned about the persons lowered productivity.

Procedures and statistical analysis
Data was collected over four days at different hours. Every fifth swimming pool guest was approached by the researcher when entering the lobby and asked if he/she was interested in participating, given that they fulfilled the inclusion criteria. An introductory letter was attached to the questionnaire with information about the study and instruction on how to complete the survey. Participants were asked to fill out the questionnaire on their own and put it in an unmarked envelope, seal it and post in a secure box located in the lobby. An equal number of men and women were recruited. The survey was reported to the Data Protection Authority in Iceland and ethics approval was gained from Brunel University, London.

Descriptive statistics were used to provide an overview of the data and examine its distribution. To explore differences in frequencies based on gender, age and educational level chi-squares tests were carried out. During the process age and education level were merged into two groups each in order to make the analysis more purposeful.

RESULTS

Background information

Out of the 100 participants who approved participation 85 completed the survey resulting in a response rate of 85%. Those who did not complete the survey typically mentioned that the questionnaire had too many questions and took too long to fill out. Participants' gender, age and level of education are shown in table 1.

Beliefs about causes of depression

Ratings of perceived causes of depression are shown in table 2. Causes related to social stressors received the highest responses and were generally rated as likely or very likely. Thereof, problems from childhood were perceived to be the most likely cause, but 88% rated them as either likely or very likely. A correspondent number for day to day problems was 82%. A recent traumatic event received more mixed responses. Although considered a likely or a very likely cause by 59%, 13% perceived it as not likely and 21% that it depended on the circumstances or situation. Genetic cause was rated likely or very likely by 69%, but 17% reported that they did not know. Personal related factors were considered a likely or very likely cause by more than 40% of participants, but 27% did not know whether being a nervous personality could be a cause and 23% thought that the likelihood of depression caused by weakness of character depended on the situation. Both biological subgroups were rated as not likely by a vast majority of the participants. However, respectively 13% and 15% did not know if a virus/infection or an allergy reaction could be the cause.

Due to distribution of responses, Chi-square tests could be carried out for only three variables. Significant associations were found between age of participants and weakness of character, $\chi 2$ (2, N=85) = 6,775, p = 0,034, and between participants´ gender and weakness of character, $\chi 2$ (2, N=85) = 7,203, p = 0,027. A great majority (88%) of the younger participants, aged 18-44 years, thought weakness of character was not a likely cause compared to 17% of those at the age of 45 years or older. Of men, 68% thought it was a very likely or a likely cause compared to 32% of women.

Beliefs about risks of depression

As illustrated in table 3, being unemployed was considered a very likely risk by 73% of the participants. The factors being divorced or separated, belonging to a low socioeconomic group or being older than 65 were all rated as a very likely risk by 30 – 48%. Factors considered by 30 - 45% as making no difference were being a woman, belonging to a low socioeconomic group, being under the age of 25 and being single. Due to distribution of responses, Chi-square tests could be carried out for only four variables. No significant associations were found.

DISCUSSION

In the light of the above findings it is important to reflect on how public beliefs on cause and risk for depression may affect or influence help seeking, awareness campaigns and mental health literacy. With a predominant belief in the importance of social stressors as a causal factor of depression and the view of e.g. 73% of the participants on unemployment as a likely risk, people may not seek help in the health care sector for their negative feelings. Why should they seek medical help for their mental health issues if they believe the cause and risk for their problems mostly lie in the social environment? According to Thorlacius et al. (2010) there seems to be a strong connection between mental illnesses and disability determination. It is therefore quite interesting that the findings in this study indicate the belief that people are likely to become depressed because of unemployment. The question on cause and effect is raised. Perhaps a gap has been identified between the public beliefs and help seeking behaviour as Mechanic (2008) suggests. Although public educational or awareness programs have been recommended by the World Health Organization, limited effort has been made to measure their effectiveness (Dumesnil and Verger, 2009). Perhaps it needs to be examined whether these programs are in line with the beliefs of the general public. One might wonder whether public programs or campaigns are based

Table 1. Background information

Gender:	Female	Male				
	47%	53%				
Age group:	18-24	25-34	35-44	45-54	55-64	65+
	11%	31%	18%	9%	21%	10%
Education:	Primary school	Secondary school	University	Certificates	Other	
	12%	21%	47%	15%	5%	

Table 2. Perceived causes of depression

Cause	Very likely	Likely	Not likely	Depends	Do not know
Biological:					
• Virus/Infection	0%	1%	79%	7%	13%
• Allergy reaction	0%	1%	79%	5%	15%
Social stressors:					
• Day to day problems	34%	48%	5%	11%	2%
• Recent death of a close friend or relative	28%	47%	6%	12%	7%
• Recent traumatic event	19%	40%	13%	21%	7%
• Problems from childhood	43%	45%	1%	5%	6%
Genetic:					
• Inherited or genetic	22%	47%	6%	8%	17%
Person related:					
• Being a nervous person	5%	36%	17%	15%	27%
• Weakness of character	5%	40%	14%	23%	18%

Table 3. Perceived risks of depression

Risk factor	Very likely	Likely	Not likely	Depends	Do not know
Gender:					
• Being a woman	15%	45%	17%	9%	14%
Age:					
• Aged under 25	14%	31%	17%	12%	26%
• Aged over 65	30%	19%	14%	15%	22%
Social economic status:					
• Belonging to a low socioeconomic group	38%	32%	2%	18%	10%
Employment:					
• Being unemployed	73%	6%	1%	13%	7%
Relationship status:					
• Being divorced or separated	48%	20%	0%	20%	12%
• Being single	19%	31%	6%	21%	23%

on what professionals think that the public ought to know or on information on what the public knows, doesn't know, and wants to know. The findings of this study indicate strong beliefs in social influence as cause for depression among the public. Instead of focusing on disease recognition, available treatments and the advantage of help-seeking as Jorm, Christensen and Griffiths (2005) have pointed out programs or campaigns may need to reflect more on social circumstances and everyday life experience of the public.

It is noteworthy that 40% of participants considered having a weakness of character as a likely cause of depression since the definition on weakness of character generally implies negative evaluation of a person. Even though stigma has been related to the biological beliefs in cause for depression (Schomerus et al., 2012) it has also been pointed out that such causal attribution may lead to shame in individuals who become depressed (Jorm, Christensen and Griffiths, 2005). There were however, mixed responses regarding weakness of character. Possibly people have trouble understanding what weakness of character explicitly refers to and therefore choose not to take a direct stand on the matter. The responses were partly age and gender related since younger people were more likely not to consider it as a likely cause. Perhaps this also connects to the meaning of weakness of character and reflects a generation gap on how the term is understood and used. Earlier on medical terms were not so much used but rather descriptions on the state the person was in e.g. a nervous, fragile or a weak person. Interestingly, no significant difference was detected on participant's educational background and their beliefs about weakness of character being a likely cause. Level of education did not affect the participants' views.

Limitations

A limitation of this pilot study is the small convenience sample which was limited to people using one public swimming pool. Even though use of swimming pools is widespread in Iceland it is likely that more active people go swimming and more communicative and co-operative people participate in surveys. No information is available about those who didn't complete the questionnaire. The high educational level of participants does not reflect the educational level of Icelanders as in the year 2011 when

around 34% of the population aged 25 to 64 years old had a university degree (Statistics Iceland, 2013). The questionnaire used was not tested for validity and reliability. Therefore, although the findings offer important pointers to public beliefs about depression they cannot be generalised and should preferably be followed-up upon using a larger sample.

CONCLUSION

The beliefs of the public give important information on how and what to focus on in order to tackle depression as a global public health problem and should therefore be monitored closely. The participants in this study held a holistic view on causes and risk for depression and believed these to be multi-dimensional and strongly connected with social, environmental and economic factors. These findings are consistent with those from other high income countries and suggest a gap that may explain and influence help seeking behaviour. The question remains whether and how the public should be educated about these issues. More emphases should be put into service in the community that is directly linked to social circumstances. Mental health beliefs and experience of the public should be taken into account in the design and implementation of educational campaigns, as the views of the general public cannot be neglected.

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REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Angermeyer, M. C., Matschinger, H. and Riedel-Heller, S. G. (1999). Whom to ask for help in case of a mental disorder? Preference of the lay public. *Social Psychiatry and Psychiatric Epidemiology,* 34(4), 202-210.

Atzmüller, C. and Steiner, P. M. (2010). Experimental vignette studies in survey research. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences,* 6(3), 128-138. doi 10.1027/1614-2241/a000014

deCODE genetics. (n.d.). *News and events.* Available at: http://www.decode.com/news-events/

Directorate of Health. (2013a). *Engin heilsa án geðheilsu* [No health without mental health]. Available at: http://www.landlaeknir.is/heilsa-og-lidan/gedraekt/greinar/grein/item19641/Engin-heilsa-an-gedheilsu

Directorate of Health. (2013b). *Þjóð gegn þunglyndi* [Alliance Against Depression (IAAD)]. Available at: http://www.landlaeknir.is/heilsa-og-lidan/verkefni/item16380/Thjod_gegn_thunglyndi

Dumesnil, H. and Verger, P. (2009). Public awareness campaigns about depression and suicide: A review. *Psychiatric Service,* 60(9), 1203-1213. doi: 10.1176/appi.ps.60.9.1203

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity.* Englewood Cliffs: Prentice-Hall.

Gomm, R. (1996). Mental health and inequality. In T. Heller, J. Reynolds, R. Gomm, R. Muston and S. Pattison (editors), *Mental health matters: A reader* (pp. 110-120). Houndmills: Palgrave.

Haslam, N. (2007). Lay conceptions of mental disorder: Introduction to the special issue. *Australian Psychologist,* 42(2), 79-80. doi: 10.1080/00050060701280557

Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders. *The British Journal of Psychiatry,* 177(5), 396-401. doi: 10.1192/bjp.177.5.396

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B. and Pollitt, P. (1997). Public beliefs about causes and risk factors for depression and schizophrenia. *Social Psychiatry and Psychiatric Epidemiology,* 32(3), 143-148.

Jorm, A. F., Christensen, H. and Griffiths, K. M. (2005). Public beliefs about causes and risk factors for mental disorders: Changes in Australia over eight years. *Social Psychiatry and Psychiatric Epidemiology,* 40(1), 764-767. doi: 10.1111/j.1440-1614.2006.01738.x

Jorm, A. F., Blewitt, K. A., Griffiths, K. M., Kitchener, B. A. and Parslow, R. A. (2005). Mental health first aid response of the public: Result from an Australian national survey. *BMC Psychiatry,* 5(1),

9-17. doi: 10.1186/1471-244X-5-9

Lauber, C., Falcato, L., Nordt, C. and Rössler, W. (2003a). Do people recognize mental illness? Factors influencing mental health literacy. *European Archives of Psychiatry and Clinical Neuroscience,* 253(5), 248-251. doi: 10.1007/s00406-003-0439-0

Lauber, C., Falcato, L., Nordt, C. and Rössler, W. (2003b). Lay beliefs about causes of depression. *Acta Psychiatrica Scandinavica,* 108(418), 96-99.

Mechanic, D. (2008). *Mental health and social policy: Beyond managed care.* Boston: Pearson.

Ministry of Welfare. (2012). *Velferðarstefna: Heilbrigðisáætlun til 2020* [National Health Plan 2020]. Reykjavík: Ministry of Welfare.

Moynihan, R., Heath, I. and Henry, D. (2002). Selling sickness: The pharmaceutical industry and disease mongering. *British Medical Journal,* 324(7342), 886–891. doi: http://dx.doi.org/10.1136/bmj.324.7342.886

Organization for Economic Cooperation and Development. (2013). *Health at a Glance 2013: OECD Indicators.* OECD Publishing. Available at: http://dx.doi.org/10.1787/health_glance-2013-en

Orkuspárnefnd. (2005). *Almennar forsendur orkuspáa 2005: Samantekt fyrir vinnuhópa Orkuspárnefndar* [General considerations of energy use 2005: Summary for the National Energy Authority workgroups]. Reykjavík: National Energy Authority.

Pringle, E. (2006). *Big pharma research racket is killing people.* OpEdNews.com. Available at: http://www.opednews.com/articles/genera_evelyn_p_060623_big_pharma_research_.htm

Reavley, N. J. and Jorm, A. F. (2012). Belief in the harmfulness of antidepressants: Associated fac-tors and change over 16 years. *Journal of Affective Disorders,* 138(3), 375-386. doi:10.1016/j.jad.2012.01.012

Schomerus, G., Schwan, C., Holzinger, A., Corrigan, P. W., Grabe, H. J., Carta, M. G. and Angermeyer, M. C. (2012). Evolution of public attitudes about mental illness: A systematic review and meta-analysis. *Acta Psychiatrica Scandinavica,* 125(6), 440-452. doi: 10.1111/j.1600-0447.2012.01826.x

Social Insurance Administration. (2013). *Greining á orsök örorku eftir sjúkdómaflokkum fyrir árið 2012* [Disability analysis by disease in 2012]. Available at: http://www.tr.is/tryggingastofnun/frettir/nr/1429

Sonja Stelly Gústafsdóttir and Angela Scriven. (2009). Public beliefs about depression in Iceland. In Gunnar Þór Jóhannesson and Helga Björnsdóttir (editors). *Rannsóknir í félagsvísindum X, Félags og mannvísindadeild* [Research in Social Sciences X, Faculty of Social and Human Sciences] (pp. 399-406). Félagsvísindastofnun Háskóla Íslands [The Social Science Research Institute University of Iceland].

Statistics Iceland. (2014). *General government expenditure on disability 1998-2014.* Available at: http://px.hagstofa.is/pxen/pxweb/en/Efnahagur/Efnahagur__fjaropinber__fjarmal_almtr_velferd__fjarmal_almannatr_velferd/THJ05714.px/table/tableViewLayout1/?rxid=30e5a4e1-b627-4659-b62c-177693a287df.

Statistics Iceland. (2013). *Educational attainment of the population 2003-2011, percentage distribution.* Available at: http://www.statice.is/?PageID=1666&src=https://rannsokn.hagstofa.is/pxen/Dialog/varva.xxdsffdsa=SKO00010%26ti=Educational+attainment+of+the+population+2003%2D2011%2C+percentage+distribution++++++++++%26path=../Database/skolamal/yfirlit/%26lang=1%26units=Percent

Thorlacius, S., Stefansson, S. B., Olafsson, S. and Tomasson, K. (2010). Increased incidence of disability due to mental and behavioural disorders in Iceland 1990-2007. *Journal of Mental Health,* 19(2), 176-183. doi: 10.3109/09638230902968316

Tones, K. and Green, J. (2004). *Health promotion: Planning and strategies.* London: Sage.

World Health Organization. (2004). *International Statistical Classification of Diseases and Health Related Problems (ICD-10).* Geneva, World Health Organization.

World Health Organization. (2005). *Mental health, facing the challenges, building solutions: Report from the WHO European ministerial conference.* Copenhagen: World Health Organization Regional Office for Europe.

World Health Organization. (2006). The European health report 2005: Public health action for healthier children and population. Copenhagen: World Health Organization Regional Office for Europe.

World Health Organization. (2008). *The global burden of disease: 2004 update.* Geneva: World Health Organization.

World Health Organization. (2013). *The European mental health action plan.* Copenhagen: World Health Organization Regional Office for Europe.

World Health Organization. (2016). *Depression. Fact sheet.* Available at: http://www.who.int/mediacentre/factsheets/fs369/en/