Mental health literacy among Internet users

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Abstract

Background: Intervening early in the course of psychotic illness may improve the long-term outcome. Early intervention requires early recognition, and one factor that influences early recognition is the level of mental health literacy (MHL) in the population.

Aim: To investigate the level of MHL regarding depression and psychosis in an Irish population.

Method: We invited the registered users of Ireland’s most popular community website (http://www.boards.ie) to participate in an online survey. Two standardized vignettes depicting depression and psychosis were presented, and respondents were asked about what they thought the conditions were and who might be best placed to help the person. Participants were asked a series of knowledge-based questions about psychosis.

Results: Nine hundred and ninety-eight (770 males, 228 females) people participated. Using a case vignette model, 78% and 93% of respondents correctly identified depression and psychosis/schizophrenia, respectively. However, half of the participants described schizophrenia as a ‘split personality disorder’. Neither age nor urbanicity influenced the probability of correctly identifying the diagnosis, but females and university students were more likely to correctly identify the diagnosis. More than 90% believed intervening early in psychosis is likely to improve outcome.

Conclusion: The Internet users in this survey have high levels of MHL, identify appropriate pathways to care, and their views on management are consistent with evidence-based treatments.

Key words: depression, Internet survey, mental health literacy, psychosis, schizophrenia.

INTRODUCTION

Recent research findings confirm that the duration of untreated psychosis is associated with the short- and midterm outcome of schizophrenia.1,2 Consequently, several countries have initiated early detection and intervention programmes for schizophrenia and other psychotic disorders.3,4 One factor that may influence the efficacy of early detection programmes is the population level of mental health literacy (MHL).5 The term ‘mental health literacy’ was defined by Jorm and colleagues as ‘knowledge and beliefs about mental disorders which aid their recognition, management or prevention’.6 Inherent in the notion of early intervention is adequate public knowledge regarding mental illness, which ensures that symptoms are recognized, help is sought from the appropriate party, and the appropriate treatment is undertaken and adhered to. A lack of appropriate knowledge regarding mental illness probably acts as a potential barrier to both early and appropriate interventions.7

Despite its importance, there are relatively few European studies of MHL. A recent online survey by Lauber and colleagues reported wide variability in literacy levels particularly among males.8 This Swiss study was restricted to university students and suggested that the general population may have less capacity to recognize mental illness. The incidence of mental disorders peaks in late adolescence and
early adulthood: age groups that use the Internet extensively. Consequently, we surveyed MHL in Ireland among Internet users. We chose the Internet methodology because it allows access to large sample sizes and is a medium which is increasingly being used as a source for health information. We set out to assess (i) people’s ability to recognize clinically defined depression and psychosis (ii) who they believed would help an individual with these problems and how helpful they might be (iii) specifically for psychosis, peoples’ knowledge about symptoms, treatment and recovery, and (iv) because previous literature has variably identified age, gender, occupation and urbanicity as influencing MHL, we sought to determine their influence on MHL. 

METHODS

Boards.ie (http://www.boards.ie) is Ireland’s largest Internet forum with more than 75 000 registered users (Table 1). All individuals (1 306 041) who accessed the website between October 2006 and December 2006 were shown a link to the questionnaire, and participants who chose to enter were redirected to the appropriate webpage. As a gesture of appreciation for taking part, those who completed the questionnaire were entered into a draw for an Apple iPod. There were no national mental health promotion campaigns running at the time of the study.

Demographic information relating to age (divided into nine categories: <15, 15–19, 20–25, 25–29, 30–34, 35–39, 40–44, 45–49 and >50), gender and nationality (Irish, other EU and non-EU) was compiled. We asked the participants if they were attending school, unemployed, attending a university/equivalent or employed. If the person chose employed, we provided a free text to specify the nature of employment. We also asked if people classified themselves as living in a city, a suburb or a rural setting. We combined city and suburban dwellers to form an urban–rural variable for subsequent analyses.

The questionnaire comprised two sections (Appendix 1). The first section comprised of two vignettes adapted from those developed by Wright and colleagues. The first vignette depicted a 20-year-old woman with symptoms of depression. The second depicted a 24-year-old man with symptoms of psychosis. After each vignette, we asked the respondent to choose a response from a series of options (Appendix 1). To examine help seeking, we asked a further question inquiring who they would advise the person in the vignette to seek help from. The third question asked the participants to rate how helpful they believed various people/services would be in relation to that particular vignette. Multiple responses were possible for the latter two questions. For the purposes of this research, only single (and first in the case of those suggesting more than one form of help) responses were included for analyses.

The second section comprised multiple-choice questions, with nine questions (three possible answers, one of which was correct) asking about the definition and rates of psychosis, symptoms and signs, risk factors, treatments, stigma, and prognosis.

Data were analysed using appropriate non-parametric statistics including chi-square test and Mann–Whitney U-test.

RESULTS

Nine hundred and ninety-eight participants responded to the questionnaire, yielding a participation rate of 0.076%. Table 1 illustrates the characteristics of the survey sample compared with a 2005 census survey of users of the website. The participants in this study were significantly more likely to be female and aged between 15 and 34 years.
Recognizing depression and psychosis

Almost 80% (78%) of the participants correctly identified the problem in the vignette depicting depression. In the vignette depicting psychosis/schizophrenia, 93% reported the individual as having psychosis or schizophrenia. On both occasions, 75% were correct. Females were significantly more likely to recognize depression (192/228 vs. 586/770, \( P = 0.01 \)) than males, but not more likely to recognize psychosis (216/228 vs. 713/770, \( P = 0.30 \)).

Table 2 illustrates the percentage of people, classified by age group, who correctly identified the problem in each vignette. There was no significant relationship between age and recognition of depression (Mann–Whitney \( U, z = -1.21, P = 0.2 \)) or psychosis (Mann–Whitney \( U, z = -0.6, P = 0.5 \)). There was no gender by age interaction.

### Help seeking

For depression, 53% of the respondents said that if the individual depicted in the vignette were their sibling, they would suggest they seek help from their General Practitioner (GP). The second most popular form of help chosen was family or friends (9%), followed by a counsellor, which was chosen by 5% of the respondents. For psychosis, 49% of the respondents claimed that they would suggest that their sibling seek help from their GP, while 28% suggested a psychiatrist and 7% favoured a psychologist.

### Understanding of psychosis

#### Definition of psychosis

When asked to choose from three possible definitions of psychosis, 96% of the respondents correctly identified the definition as being ‘when a person has difficulty distinguishing between what is real and not real’. Only 3% of the respondents misidentified psychosis as not being a type of mental illness, with 1% believing that psychosis most frequently occurs among people over 40 years old.

#### Prevalence rates for psychosis

Thirty-seven per cent of the respondents correctly identified the total number of the cases of psychosis in Ireland as 82 000, 43% incorrectly asserted that the total number of the cases is 34 000, and 19% believed it to be only 10 000.

#### Schizophrenia as a form of psychosis

In terms of schizophrenia’s relationship with psychosis, only 47% correctly identified it as the most common type of psychosis, and 51% of the respondents incorrectly described schizophrenia as a ‘split

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Correct recognition: depression, ( n ) (%)</th>
<th>Male ( n ) (%)</th>
<th>Female ( n ) (%)</th>
<th>Correct recognition: psychosis (including schizophrenia), ( n ) (%)</th>
<th>Male ( n ) (%)</th>
<th>Female ( n ) (%)</th>
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<td>&lt;15</td>
<td>9 (75)</td>
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<td>107 (75.4)</td>
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<td>220 (78)</td>
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<td>266 (94.3)</td>
<td>197 (93.8)</td>
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<td>25–29</td>
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personality disorder’. The notion that ‘schizophrenia is an incurable condition’ was supported by 3% of the respondents.

Causes of psychosis

In terms of potential causes of psychosis, 83% of the respondents correctly acknowledged that psychosis can be caused by cannabis. The view that psychosis is purely hereditary was supported by 15% of the respondents, while only 2% believed psychosis to be a result of poor parenting.

Hallucinations

When given three possible explanations of hallucinations, 98% of the respondents correctly identified them as ‘hearing, seeing, tasting, smelling or feeling things that are not there’. The notion that hallucinations are bizarre, firmly held beliefs was endorsed by only 1% of the respondents.

Delusions

The respondents were presented with three definitions of delusions; 71% identified the correct definition of delusions as being ‘false, fixed beliefs that are unshakeable’, while 25% of the respondents incorrectly associated them with hearing voices when nobody is around. Only 5% supported the statement that delusions can easily be challenged by others.

Prognosis in psychosis

In relation to prognosis, 93% of the respondents identified the benefits of early intervention for psychosis, agreeing with the statement ‘people with psychosis recover quicker if treated sooner’; 3% believed that ‘people with psychosis rarely recover’, with 5% supporting the assertion that ‘people with psychosis are violent’.

Helpfulness rating of anti-psychotic medication for treatment of psychosis

Ninety-one per cent of the respondents correctly identified anti-psychotic medication as important for preventing relapse in psychosis, and 6% of the participants incorrectly labelled anti-psychotics as being addictive, while 3% wrongly asserted that they could be bought over the counter or in health food stores.

Other useful treatments for psychosis

When asked to choose from three possible adjunctive treatments for psychosis, 87% of the respondents chose cognitive–behavioural therapy as a useful treatment, while 9% chose hypnotherapy. Psychosurgery was opted for by 3% of the respondents.

DISCUSSION

This Internet survey of a sample of almost 1000 registered users of Ireland’s largest Internet forum indicates that most participants correctly identify depression and psychosis from case vignettes. Most respondents described appropriate help-seeking behaviours. Additionally, the level of knowledge about risk factors, symptoms and treatment of psychosis was high, with the notable exception that half the sample considers schizophrenia as a split personality.

Studies that have examined knowledge about mental illness, particularly MHL regarding depression and psychosis, report conflicting results.6,11–16 For example, in a study of the general population in Pakistan, only 19% of the public recognized depression, and 5% correctly identified psychosis.11 In contrast, in a recent Australian study, almost half the respondents correctly identified depression, while only a quarter identified psychosis correctly.12 Lauber and colleagues reported recognition rates of 40% for depression and 74% for psychosis among 844 people in Switzerland.8 We found recognition rates for depression similar to the Australian study but much higher recognition rates for psychosis/schizophrenia than these previous studies.

One possible explanation for the high recognition rates in the present study was that we used Internet-mediated research. Although using the Internet is associated with advantages including anonymity and candidness, there are also potential limitations.10,17 Respondents could theoretically seek the answers to questions on alternative websites or in books while completing the questionnaire, and the use of an incentive could motivate people to do this. However, the incentive was for those who participated, not for those who got correct answers. Furthermore, we did not allow people to save or progress without completing the entire questionnaire or save a partially completed questionnaire, thus avoiding ‘resourceful intervals’. However, we do not have information about those who started the survey but did not complete it.

This sample was not representative of either the users of the website or indeed the Irish general population with a predominance of younger age groups, males and the highly educated, and so the results cannot be generalized to the general
population. Additionally, we did not apply a rigorous definition of urbanicity, leaving it to the participant to classify themselves, which may be unreliable. Using vignettes, although popular, has limitations because it focuses on the disorder rather than specific mental symptoms. We partially addressed this by supplementing the vignette strategy with a series of questions about symptoms in a multiple-choice format.

Studies from Australia and Switzerland indicate that females are better at recognizing depression in a vignette and the symptoms of depression, respectively. Similarly, our study found that women were better at recognizing depression from a vignette than their male counterparts. Females were no more likely to recognize psychosis than their male counterparts, which is consistent with an Australian study reporting no gender differences in recognizing psychosis. A quantitative design for measuring MHL may mask complex and important interpretations; open-ended qualitative data may be more helpful in identifying these interactions.

Unlike Wright and colleagues, we failed to find a marked influence of age on recognizing depression or psychosis. In the present study, people attending university or equivalent education had the highest level of literacy in terms of depression and psychosis recognition, and therefore supports the hypothesis that there may be a relationship between education and MHL. Unlike Suhaib, we did not find any difference between urban and rural dwellers in terms of recognition of either depression or psychosis/schizophrenia.

In terms of help-seeking advice, most people advised a health professional, particularly a GP. The proportion of respondents who would seek help from a GP was consistent with previous research findings, while fewer respondents opted for family and friends in this study than in those of Jorm et al and Wright et al. However, caution is required in interpreting these findings; while they may advise a sister or brother to act in this way, there is no certainty that when faced with the same personal situation, they would consult a health-care professional.

**Psychosis questionnaire**

Sixty-three per cent of the respondents underestimated the prevalence of psychosis. This may lead to underrecognition and perpetuate stigma. In terms of aetiology, most respondents recognized that cannabis may play a role in contributing to psychotic symptoms, contradicting previous research findings, which suggested that people may not be aware of the potential risks of cannabis use. This heightened awareness may reflect the current debate in the media regarding cannabis.

More than 95% of the people correctly identified the definition of a hallucination. While most correctly identified the accurate definition of a delusion, a quarter confused delusions with hallucinations. Lauber et al. observed a similar confusion among university students, whereby 30% of respondents asserted that delusions of control are not a symptom of psychosis, and 32% believed hallucinations of taste to be the same. Despite these encouraging overall findings, half the sample considered schizophrenia to be a ‘split personality’, a finding consistent with that in a similarly educated Swiss sample.

The knowledge about prognosis, medication and adjunctive treatments compare favourably with previous research and may reflect a secular trend. Strikingly, almost 92% of the respondents believed that people with psychosis recover quicker if treated sooner, endorsing the concept of early intervention services for psychosis.

**CONCLUSION**

The MHL among a sample of Ireland’s largest Internet forum is high with good levels of disorder recognition, symptom recognition, appropriate help-seeking behaviour and views on treatment. However, many still believe schizophrenia is a ‘split-personality’.

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**REFERENCES**


APPENDIX 1

Detect questionnaire

Enter age: <15 years 15–19 years 20–24 years 25–29 years 30–34 years 35–39 years 40–50 years >50 years

Where do you live: City Suburb Rural

Gender: Male/Female Nationality: Irish Other European Non-EU national

Occupation: School student Third Level student Unemployed Employed (Job title)

Vignette 1:

Sally is 20 years old. For the last few weeks, she has been feeling unusually sad and miserable. Even though she is tired all the time, she has trouble sleeping nearly every night. Sally doesn’t feel like eating and has lost weight. She can’t keep her mind on her work and puts off making decisions. Even day-to-day tasks seem too much for her. This has come to the attention of her boss, who is concerned about Sally’s recent poor work performance.
A) What, if anything, do you think is most likely wrong with Sally? (Please tick one only)

- Anxiety
- Anorexia
- Stress
- Psychosis
- Schizophrenia
- Depression
- Nothing at all
- None of the above

B) If Sally was your sister, who would you suggest she go to for help?

C) How helpful do you think the following people could be to Sally? (please rate all)

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<td>Psychic or spiritual healer</td>
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Vignette 2:
John is 24 years old and lives at home with his parents. He has had a few temporary jobs since finishing school but is now unemployed. Over the last 6 months, he has stopped seeing his friends and has begun locking himself in his bedroom and refusing to eat with the family or to have a shower. His parents also hear him walking about his bedroom at night while they are in bed. Even though they know he is alone, they have heard him shouting and arguing as if someone is there. When they try to encourage him to do more things, he whispers that he won’t leave home because he is being spied upon by the neighbour. They know he is not taking drugs because he never sees anyone or goes anywhere.

A) What, if anything, do you think is most likely wrong with John? (please tick one only)

- Anxiety
- Anorexia
- Stress
- Psychosis
- Schizophrenia
- Depression
- Nothing at all
- None of the above

B) If John were your brother, who would you suggest he go to for help?

C) How helpful do you think the following people could be to John? (please rate all)
MCQ
Please circle the one correct answer for each of the following:

Q1. Psychosis:
- Is not a type of mental illness
- Is when a person has difficulty distinguishing between what is real and not real
- Most often occurs in people over 40 years old

Q2. Psychosis affects:
- Enough people in Ireland to fill Croke Park (75,000)
- Enough people in Ireland to fill Landsdowne Road (34,000)
- Enough people in Ireland to fill the Point Depot (10,000)

Q3. Schizophrenia is:
- A split personality disorder
- The most common type of psychosis
- An incurable condition

Q4. Psychosis:
- Can be caused by cannabis
- Is purely hereditary
- Is caused by poor parenting

Q5. Hallucinations:
- Are bizarre, firmly held beliefs
- Are hearing/seeing/tasting/smelling or feeling things that are not there
- Are usually untreatable

Q6. Delusions:
- Are when you hear voices when no one is around
- Are unusual beliefs held with conviction
- Can be easily challenged by others

Q7. People with psychosis:
- Rarely recover
- Are usually violent
- Recover quicker if treated sooner
Q8. Medications for psychosis:
   - Are addictive ○
   - Can be bought over the counter or in health food stores ○
   - Help prevent relapse ○

Q9. Other proven useful treatments for psychosis include:
   - Hypnotherapy ○
   - Cognitive Behavioural Therapy (CBT) ○
   - Psychosurgery ○