

Insight in mental illness: an educational review

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Abstract

Insight is an elusive concept in psychiatry with a long history of divergent definitions and methods of measurements. Although insight was previously presumed to be a binary construct that an individual could possess or lack, there is an emerging consensus that insight is a multi-dimensional construct consisting of a spectrum of phenomena.¹ Over recent years there has been increasing interest in the topic of insight, especially in relation to psychotic disorders where insight is frequently diminished. In this educational review we will discuss the history associated with the construct of insight, current theories in relation to insight, the association of insight with clinical symptoms and prognosis with particular reference to psychosis, the various methods of measuring insight, the aetiology of insight and present deficiencies in our understanding of insight.

Key words: Insight; Awareness; Psychological defence; Frontal lobe.

Introduction

The earliest reference to a lack of insight into one's illness can be dated to 65 AD when the Roman philosopher Lucius Annaeus Seneca described a lady who had no awareness that she was blind and complained "that my home is dark".² We now would presume that the lady in question suffered from Anton's syndrome, a syndrome of cortical blindness where the individual has a lack of awareness of the deficit. Until the 19th century the official view of insanity was based on the presence of delusions which were embedded in an implicit 'lack of insight'.³ Karl Jaspers believed that individuals with psychosis could not possess insight, and that insight was a dichotomous construct, being either present or absent.³

Although insight was increasingly recognized as an important phenomenon within psychiatry, with Aubrey Lewis defining insight as "a correct attitude to morbid change in oneself" in an essay in 1934,⁴ insight continued to be viewed in this dichotomous fashion. The first move from this

binary viewpoint occurred in 1958 when Eskey introduced the term 'partial insight' to describe individuals who had a limited understanding that they suffered from a psychological illness.⁵ Over the last two decades insight has been increasingly viewed as a multi-dimensional construct, incorporating a spectrum of phenomena.^{6,7}

For many years, studies in relation to insight reflected a largely theoretical and psychoanalytical perspective often consisting of subjective interpretation of individual cases; however, more recently there has been a notable increase in the empirical study of the concept of insight. Recent studies have distinguished between current and retrospective insight,⁷ have acknowledged that patients may be aware of some symptoms but not others,⁸ and have defined 'awareness' as being a separate dimension from 'attribution'.⁸ Insight has also been described as a subcategory of self-knowledge rather than just a feature of psychotic disorders,⁹ and thus we can examine awareness in healthy individuals and consider as clinicians our own insight. Clearly insight incorporates complicated phenomena and its consideration necessitates some degree of philosophical debate about the nature of reality.

Measurement

Insight has been predominantly measured using crude global ratings often taken from the mental state examination, where one generally refers to insight as being either present or absent, or as 'good', 'partial' or 'poor'. See *Table 1* for psychometric scales for measuring insight.

One of the first instruments utilised to measure insight in a more precise manner was the insight and treatment attitudes questionnaire (ITAQ).¹⁰ This instrument evaluated an individual's perception of their treatment and their acceptance of an 'illness label', however the questionnaire is one dimensional in its design. David proposed that insight should be measured by assessing three overlapping dimensions – the recognition of one's illness, compliance with treatment and the ability to re-label unusual mental events as pathological.⁶ Further broadening this multi-dimensional view of insight, the scale for unawareness of mental disorder (SUMD), a semi-structured interview developed by Amador and Strauss evaluates 17 clinical dimensions relating to insight including hallucinations and thought disorder.⁸ This scale also allows one to measure and distinguish between current and retrospective insight. More recently, Markova and Berrios further developed the concept of insight by measuring an individual's degree of self-knowledge with the self-rated insight scale, therefore broadening insight beyond the illness model.⁹ Despite a wide range of reliable and valid insight measurements being available, these psychometric scales assess varying aspects of insight, and thus findings attained with one scale may not be generalisable to other scales.¹¹

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Table 1: Psychometric scales for measuring insight

| Author | Measure of insight | Number of items | Features of Scale | Type of scale |
|------------------------|---|-----------------|---|---------------|
| McEvoy et al, 1989 | Insight and Treatment Attitude Questionnaire (ITAQ) | 11 | Evaluates perception of treatment and acceptance of illness label | Dichotomous |
| David, 1990 | Schedule to Assess the Components of Insight Expanded (SAI-E) | 12 | Assesses recognition of illness, compliance with treatment and ability to label mental events as pathological | Likert |
| Amador & Strauss, 1990 | The Scale to Assess Unawareness of Mental Disorder (SUMD) | 37 | Evaluates insight in relation specific symptoms. | Likert |
| Markova et al, 1992 | The Insight Scale | 32 | Measures individuals degree of self-knowledge | Dichotomous |

Clinical significance of insight

Impaired awareness in relation to psychiatric disorders is common, with 50-80% of individuals with schizophrenia denying that they have a psychiatric disorder.¹² Insight is associated with other clinical symptoms and has been shown to have an important role in relation to treatment concordance, involuntary admission and risk of suicide; however improving insight remains difficult to achieve.

Clinical symptoms

See *Table 2* for the relationship between insight and symptomatology. Several studies have attempted to establish if insight is a primary symptom of psychiatric illness or a secondary phenomenon that merely reflects symptom severity (individuals with severe symptoms having less insight). Support for the concept of insight as a primary symptom is based on studies that have demonstrated no relationship between insight and psychopathology,¹³ however other studies have demonstrated a clear correlation between symptom severity and lack of insight suggesting that insight is a secondary phenomenon.¹³ There are a number of potential reasons for this discrepancy, including studies using heterogeneous samples, studies with small sample sizes, and the use of different scales to measure insight.

A recent meta-analysis of 40 studies assessing insight in schizophrenia demonstrated a moderate but significant inverse relationship between both total positive (weighted effect size = -0.25) and total negative symptoms (weighted effect size = -0.23) and the individual's level of insight.¹³ However, the opposite was true in relation to depressive symptoms – individuals with schizophrenia who suffered from depression demonstrated greater levels of insight (effect size = 0.18).¹³ We discuss depressive symptoms in schizophrenia and the associated underlying psychological constructs later in this educational review. The 'deficit syndrome', characterised by a diminished range of affect, reduced interest in activities and a diminished sense of purpose over time, has been shown to be particularly associated with limited insight.^{7,14}

Concordance

Insight and compliance (concordance) are similar but not interchangeable constructs. Although insight into one's illness is associated both with treatment concordance,¹⁵⁻¹⁷ and lower

hospitalisation rates,¹⁰ many individuals concord with treatment despite a denial of their illness.¹⁵ Conversely, others are non-concordant despite a good awareness of their illness,¹⁵ therefore, whilst these are two similar constructs their relationship is not straightforward and other factors including one's personality and one's social milieu may affect either one of these constructs and not the other.¹⁸

Involuntary admission

In addition to lower rates of treatment concordance in individuals with limited awareness of their illness, individuals with psychosis admitted to hospital involuntarily, demonstrate lower mean insight scores compared to those that are admitted voluntarily despite similar levels of psychopathology.^{19,20} Improvement in levels of insight during admission has, however, been shown to be independent of civil status. Similar findings have been noted for individuals admitted to hospital involuntarily with manic episodes.²⁰

Suicidal risk

The relationship between suicide, deliberate self-harm and insight is complicated. Approximately 5% of individuals with schizophrenia die by suicide.²¹ Diminished insight in schizophrenia has been associated with a poor prognosis and non-concordance with treatment, both of which are risk factors for suicide.¹⁰ However, some studies have suggested that the presence of insight is, in itself, a risk factor for increased suicidal ideation in schizophrenia.²² Others, have not found a relationship between awareness of illness and suicidal ideation,²³ however possessing insight into some features of one's illness such as delusions, negative symptoms and the social consequences of schizophrenia, has been associated with an increased risk of suicide.²³ Although there appears to be an association between the presence of insight and risk of suicide, this relationship has yet to be fully established.

Insight in affective disorders

Insight has predominantly been studied in schizophrenia to date; however, a number of studies have also assessed insight in affective disorders. Studies assessing insight in bipolar disorder have generally reported a significant impairment in insight during (hypo)manic episodes,^{7,20,24-26} however, this appears to be a state phenomenon with good insight demonstrated during euthymic periods.^{20,24-26} This differs to

Table 2: Relationship between Insight and Symptomatology

| Author | Scale/Measurement | Sample size | Findings |
|----------------------|------------------------------|-------------|---|
| Debowska et al, 1998 | SUMD PANSS | 61 | Insight correlated with negative as well as positive symptoms |
| David et al, 1992 | SAI PSE | 91 | Insight correlated with global severity of illness |
| Kemp & Lambert, 1995 | SUMD PANSS | 29 | Insight correlated with positive but not negative symptoms |
| Kim et al, 1997 | SAI BPRS SANS | 63 | Insight correlated with positive but not negative symptoms |
| David et al, 1995 | SAI PSE | 150 | No correlation between insight and psychopathology |
| Shad et al, 2004 | HDRS BPRS SAPS SANS | 35 | No correlation between insight and psychopathology |

findings in schizophrenia where insight displays more persistent characteristics (insight can be impaired when psychotic symptoms are present or absent and can deteriorate when symptoms improve).²⁷ Impairment of insight is similarly affected in those with and without psychosis in bipolar disorder,²⁰ and, as in schizophrenia, diminished insight appears to be associated with a poor prognosis.²⁰

Insight is less impaired in depression with more severe depression being associated with greater levels of insight.^{7,24-27} However, when severe depression is complicated by psychotic features, insight is often poor,⁷ although dramatic improvement occurs on symptom recovery.⁷ To our knowledge, there have been no comparative studies assessing insight levels in unipolar and bipolar depression. Insight in depression and bipolar disorder has been shown to be associated with treatment adherence.²⁸

Improving insight

Due to the association of insight with symptom severity, treatment concordance, involuntary admission and possibly risk of suicide, it is important to attempt to improve insight levels in those with psychiatric disorders, but also to be aware of the possible dangers in doing so. To date, there is no evidence that traditional psycho-educational techniques have not been demonstrated to improve either insight or treatment concordance.^{29,30}

However, studies evaluating intensive behavioural programmes and 'Compliance Therapy' (a combination of cognitive behavioural therapy and motivational interviewing),^{31,32} have in some,^{31,33} but not all studies,³⁴ demonstrated a benefit in increasing treatment concordance rates but have not necessarily improved insight levels.^{30,32}

Aetiological theories

There are a variety of proposed mechanisms which may contribute to diminished insight, with most research focusing on psychological theories, neuropsychological deficits and neuroanatomical abnormalities. To date we are unaware of any genetic theories associated with insight.

There are two differing psychological schools of thought relating to insight – one that views poor insight as a psychological defence and one that views insight as an adaptive coping mechanism. A more contemporary proposition views unawareness of illness as reflective of neuropsychological deficits – the acceptance of this proposition would raise significant issues, for example providing such a material aetiology for insight may clarify legal issues around the capacity to consent to treatment.³⁵

Psychological defence

Traditionally, poor insight was viewed as arising from psychological defences.³⁶⁻³⁸ Psychological defence mechanisms are psychological strategies used by individuals (and by extension groups of individuals and even entire nations at times) to cope with reality and to maintain self-image. Freudian psychology claims that poor insight may result from the ego's avoidance of a truth that threatens one's self-image causing a defensive suppression of rationality and resulting in an unwillingness to accept real deficits in functioning.

A number of studies have noted an association between post-psychotic depression and defensive denial,^{36,38} with the proposition that post-psychotic depression represents a stage of recovery from psychosis, stemming from a lessening of defensive denial and a subsequent increase in insight. This theory suggests that individuals with psychosis who accept the reality of their illness are more susceptible to developing depression.

External attribution

This theory proposes the opposite direction of causality to psychological defence; suggesting that individuals who suffer from depressive symptoms are more likely to have greater levels of insight, suggesting that depressed individuals are more realistic in their outlook.³⁹ A self-serving bias occurs when individuals attribute their successes to internal or personal factors but attribute their failures to situational factors beyond their control. This is also known as an 'external or defensive attribution' and is frequently demonstrated by

the tendency of individuals to take credit for success but to deny responsibility for failure.^{34,38}

In studies examining depressed and euthymic college students, the depressed cohort was more accurate in their self-evaluation, and displayed less self-serving bias than euthymic individuals.⁴¹ When these two groups were compared to individuals with schizophrenia, the same cognitive distortions displayed by control individuals were displayed by those with schizophrenia, suggesting that cognitive distortions represent a normal pattern of functioning and that individuals with and without schizophrenia, utilise a generally adaptive bias to evaluate their behaviours and their outcomes.

This therefore suggests that self-deception is adaptive and essential to the regulation of euthymic mood states. Furthermore, an inverse relationship between elated mood and insight has been observed, suggesting that unawareness represents a disinhibition of normally adaptive cognitive biases.³⁹

Neuropsychological deficit

Individuals who are unaware of a physical deficit, particularly post-stroke, are deemed to suffer from 'anosognosia'.⁴² This term describes individuals with significant difficulties in motor abilities, vision, language and various other cognitive functions but who are unaware of their impairments. Contemporary research used this term to refer to a non-specific failure to recognise one's disease in general, however in recent years, anosognosia has referred to a specific lack of awareness of distinct neurological physical symptoms. Neuroanatomical theories of anosognosia relate this deficit principally to abnormalities in the non-dominant parietal lobe,⁴³ although both the prefrontal lobes,⁴⁴ and diffuse brain damage have also been implicated.⁴⁵

There are clear parallels between the unawareness in neurological disorders and the lack of awareness in relation to psychotic symptoms found in schizophrenia. In both instances the unawareness is severe (but may lie on a continuum of severity), persists despite conflicting evidence and may be accompanied by confabulation. There can also be a general lack of concern in relation to the presence of psychotic symptoms, which is similar to anosodiaphoria, found in some individuals with neurological deficits.⁴⁶ Kraepelin remarked on this phenomenon (in individuals with schizophrenia) stating there may be "no real understanding of the gravity of the disorder".⁴⁴

Due to these parallels, several studies in recent years have examined the relationship between neuropsychological functioning and insight.⁴⁷⁻⁴⁹ Of particular note, Young and colleagues found a significant correlation between awareness of illness as measured by the SUMD and two variables (categories completed and number of perseverative errors) of the Wisconsin Card Sorting Test (WCST), when they examined individuals with chronic schizophrenia.⁴⁹ Subsequently, there have been over 20 studies examining insight in relation to the WCST performance with the majority demonstrating a negative correlation between insight and the number of perseverative errors.

These findings may suggest that reduced insight is associated with abnormal frontal lobe functioning. However, other studies using different measures of frontal lobe functioning,

including the trail making B test and verbal fluency tests, have not demonstrated similar or consistent results.⁵⁰⁻⁵² Other studies have also failed to demonstrate an association between insight and intelligence quotient,⁵⁴ and insight and parietal lobe function.⁵⁴

Neuroimaging findings

No neuropathology studies to date have evaluated brain anatomy and insight. However, a number of neuroimaging studies have evaluated this association, although most studies have examined individuals with chronic schizophrenia after long-term exposure to antipsychotic medication. Data from structural magnetic resonance imaging (sMRI) studies have demonstrated inconsistent findings, particularly in relation to the association of insight to ventricular volume, ventricular-brain ratio and cortical atrophy.⁵⁵⁻⁵⁹

An association however has been demonstrated both in individuals with chronic schizophrenia and in neuroleptic naïve first episode psychotic individuals, between low levels of insight and bilateral reduction in volume of the middle frontal gyrus, gyrus rectus and left anterior cingulate gyrus.⁵⁷⁻⁵⁹ A recent (unreplicated) finding noted a significant negative correlation between insight and right parietal lobe volume.⁶⁰ Thus, preliminary evidence from neuroimaging studies implicates the frontal and parietal lobes volume deficit with impaired insight, both regions having been previously implicated by neuropsychological deficits or tests.

Criticisms of insight as a construct

There has been some criticism of the concept of insight from those who believe that reduced insight is 'protective' and that increased insight may lead to depression and an increased risk of suicide. However as detailed above, the relationship between mood and insight is complex and the direction of causality is not yet clear.

Indeed, the opinion has been expressed that the concept of insight was developed by psychiatrists as a type of political coercion of the mentally ill and that the personal and social significance of an individual's psychotic symptoms may be lost within the narrow psychiatric concept of insight.⁶¹ This criticism is not merely the view of the anti-psychiatry movement; it has been suggested that the concept of insight is 'Eurocentric',⁶² and consequently little attention has been given to the frameworks that different cultures may use to explain their illnesses. This point has been a matter of some interest recently and has led to a number of studies of insight across cultures.^{62,63}

Conclusion

Poor insight is a common phenomenon in psychiatric illness, particularly in psychotic disorders and empirical research in this area has increased in recent years with insight now being regarded as a multi-dimensional construct. Impaired insight is associated with higher rates of involuntary detention, increased symptoms and reduced concordance with treatment; however the relationship to depression and suicidal ideation is less clear. Aetiological theories principally relate to external attribution, and neuropsychological deficits, in particular frontal lobe dysfunction.

Although the concept of insight has attracted some criticism, it would appear beneficial to try and improve an

individual's insight where possible; however there is limited evidence to date supporting the use of various psycho-education techniques.

Declaration of Interest: None.

Recommended reading:

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