



## Dissociative Symptoms Among Individuals Affected by Mass Psychogenic Illness: A Study on the Indonesian Island of Nias

Michael Seno Rahardanto  
Faculty of Psychology, Widya  
Mandala Catholic University  
Surabaya  
michael@ukwms.ac.id  
(Corresponding author)

Simon  
Faculty of Psychology, Widya  
Mandala Catholic University  
Surabaya  
simon@mahaghora.com

Jaka Santosa Sudagijono  
Faculty of Psychology, Widya  
Mandala Catholic University  
Surabaya  
jaka\_s@ukwms.ac.id

Nurul Hartini  
Faculty of Psychology, Airlangga  
University  
Surabaya  
nurul.hartini@psikologi.unair.ac.id

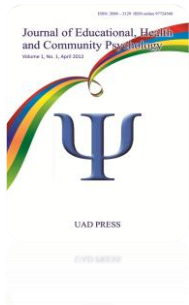
Dicky Susilo  
Faculty of Psychology, Widya  
Mandala Catholic University  
Surabaya  
jd\_susilo@yahoo.com

Rahkman Ardi  
Faculty of Psychology, Airlangga  
University  
Surabaya  
rahkman.ardi@psikologi.unair.ac.id

### Abstract

Mass psychogenic illness is a phenomenon that occurs every year in Indonesia, mainly in schools and factories. In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, this phenomenon is classified as dissociative disorders. However, the Indonesian diagnostic manual of mental disorders (the *PPDGJ*) classified the phenomenon as a conversion disorder. The confounding diagnosis will likely result in less effective and less humane interventions. This study aims to determine the symptoms experienced by individuals experiencing mass psychogenic illness, therefore contributing to the current literature regarding the proper diagnostic of the spirit possession. Samples (N=55) were assessed using the Dissociative Disorder Interview Schedule based on DSM-5. The Beck Depression Inventory and Wong-Baker Face Rating Scale are also used to supplement the data. Findings indicate that the subjects fit the diagnostic criterion of several disorders, namely somatization (experienced by 98.18% of individuals), major depression (49%), trance (69%), childhood physical abuse (35%), and borderline personality disorder (47.2%). However, only 14.54% of subjects fulfilled the diagnostic criterion of dissociative amnesia, 7.27% for diagnostic fugue, 3.63% for depersonalization/derealization, 5% for dissociative identity disorder, 11% for other specified and unspecified dissociative disorder. These findings showed that mass psychogenic illness is likely the manifestation of distinct and separate mental disorders, notably that of somatization disorder, trance, borderline personality disorder, and major depressive disorder, and exclusively those of dissociative disorders.

**Keywords:** Borderline personality disorder, childhood abuse, dissociative disorders, dissociation, trance.

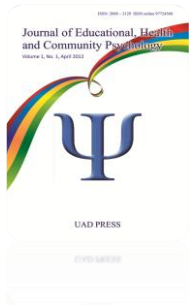


## Introduction

Mass psychogenic illness manifests as a phenomenon where individuals temporarily and involuntarily lose self-identity and environmental awareness, displaying symptoms akin to classic hysteria and often acting as if influenced by preternatural entities. Instances of such phenomena have been documented in various countries. For instance, Bartholomew and Sirois ([1996](#)) reported 115 cases of "school epidemic hysteria" affecting 7668 victims in 19 countries between 1808 and 1997. The same authors also documented 53 cases of epidemic hysteria in industrial settings, involving 2848 victims across 12 countries from 1787 to 1990 (Bartholomew & Sirois, [2000](#)). However, due to significant cross-cultural variations, the ontological and epistemological dimensions of the phenomenon are challenging to ascertain (Bhavsar et al., 2016).

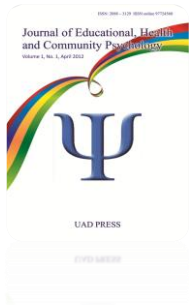
This challenge is evident in the fact that, despite similar symptoms in possession phenomena across cultures (During et al., [2011](#); Hecker et al., 2015), differing etiological attributions complicate interventions (Van Duijl et al., [2014](#); Verginer & Juen, 2019). Cultural variations also hinder the establishment of diagnostic criteria accurately representing the phenomenon (Delmonte et al., 2016; During et al., [2011](#); Padmanabhan, 2017; Van Duijl et al., [2012](#)).

In Indonesia, mass psychogenic illness is commonly known as kesurupan, derived from the word surup, signifying the perilous time after sunset when spirits were believed to roam freely (Geertz, 1964). Rahardanto and Subandi's ([2011](#)) review of 33 kesurupan cases reported in Indonesian mass media between 2004 and 2010 revealed that 66% occurred between January and March, with the remainder clustering in the last quarter (October-December). Most cases coincided with school examinations, primarily on Mondays, and overwhelmingly affected females. This phenomenon disrupts the productivity of schools or factories where it occurs and imposes social stigmas on those experiencing it (Wicaksana, [2008](#)). Effective prevention or intervention could mitigate many of these losses.



Unfortunately, a lack of empirical research often hampers mental health practitioners in handling psychogenic illness cases. While DSM-4 and subsequent DSM-5 classify the phenomenon as dissociative disorders, its etiology and interventions remain disputed (van Duijl, Cardena, de Jong, [2014](#), [2005](#); During et al., [2011](#)). Some researchers (e.g., Ross, [2011](#); Berkowsky, 2014) argue that dissociative phenomena, including "spirit possession," are responses to childhood traumas, but this narrative is still debatable, with strong disputes (e.g., Paris, [1996](#)). Indian psychiatrists Varma et al. ([1981](#)) propose that mass psychogenic illness (in the form of "spirit possession") is a type of dissociative identity disorder. Ferracuti et al. ([1996](#)) and Razali ([1999](#)) conclude that observed cases of "spirit possession" are instances of dissociative trance disorder. Eli Somer ([2004](#)), investigating similar cases in Israel, suggests possession as a trance possession disorder. Meanwhile, based on studies of mass spirit possession in India, Sethi & Bargava ([2009](#)) argue that "spirit possession" aligns with the criteria of conversion hysteria. Recent literature reviews propose diagnosing spirit possession as possession trance disorder (During et al., [2011](#); Van Duijl et al., [2014](#)).

Even diagnostic manuals differ in criteria for spirit possession. While the DSM-5 categorizes it as a form of dissociative disorder (APA, 2013), the ICD-11 classifies the phenomenon as dissociative trance disorder (WHO, 2018). More research is necessary to support a proper diagnosis of the phenomenon. Therefore, this study aims to fill the current gap in empirical research, addressing the discrepancy between the different diagnostic criteria of 'spirit possession' in DSM-5 and ICD-11, as noted by some researchers (e.g., During et al., [2011](#); Bhavsar et al., 2016; Padmanabhan, 2017), by identifying symptoms of individuals affected by mass psychogenic illness.



## **Method**

### *Participant*

The research participants consisted of 55 individuals. Among them, 49 were students at a junior high school on the island of Nias, in the western region of Indonesia. These 49 students experienced mass psychogenic illness in October 2019. The remaining six subjects were recruited through snowball sampling, comprising four female university students and two male community residents. The average age of all participants was 14.51. Overall, there were 13 male participants and 42 females. None of the participants were married. Five people held daily jobs. All participants were fluent in the Indonesian language, and none had a history of incarceration.

### *Ethical clearance*

The authors have obtained a certificate of ethical clearance, numbered 01563/WMI2/Q/2018, issued by the Center for Research Ethics at Widya Mandala Catholic University of Surabaya. Additionally, they have acquired the informed consent of those who act in loco parentis for the school children involved in this research, namely the superintendent and the headmaster of the school. Prior to data collection, the investigators inform the participants about all aspects of the research, including the freedom to choose whether to participate or not, allowing the students to give or withhold assent, as well as the option to discontinue participation at any time. The authors provided meals for the participants as incentives.

### *Data collection*

The data collection process commenced with researchers verbally reiterating the informed consent to all participants, who subsequently agreed to its contents. Following this, the authors and trained research assistants conducted interviews using DDIS-DSM-5 items. The duration of each interview varied from 40 minutes to 1 hour per individual. Additionally, researchers utilized the Beck Depression



Inventory (BDI) and the Wong-Baker Faces Rating Scale (WBFRS) to gather supplementary diagnostic information on depression and somatic pain.

### *Data analysis*

Before collecting data, the English version of the DDIS (freely available on its website) was translated and back-translated into Bahasa Indonesia by two professional translators: one with a Psy.D. degree in clinical psychology from a U.S.-based university, and another with a graduate degree in psychology from an Italian-based university. Subsequent data from DDIS-based interviews were analyzed using the DDIS-DSM-5 scoring rules designed by Colin Ross ([2019](#)). DDIS interview data were also analyzed descriptively per item.

## **Result**

This study seeks to identify the symptoms observed in individuals undergoing mass psychogenic illness, thereby enhancing the existing literature on the accurate diagnosis of spirit possession. Based on data analysis, several important findings have been discovered that enrich our understanding of possession. The following describes the findings of symptoms that correlate with dissociative trance disorders.

### *Somatic Complaints*

The average positive symptom for each subject is 10.82 for questions from numbers 3-37. Of the 55 subjects, 98.18% were identified as meeting the somatic disorder criteria. This finding indicates the magnitude of the somatization element as part of a possession trance disorder.

### *Substance Abuse*

Based on the DDIS scoring criteria, subjects will be identified as having substance abuse if they gave at least one positive answer to questions number 40-43. Data shows that only 2 subjects (out of 55) were



identified as having substance abuse (3.63%). These findings are influenced by cultural differences related to substance use. In Indonesia, in general, substances such as alcohol and other types of drugs are illegal and very difficult to obtain. These results indicate that cases of possession experienced by the subjects are not related to substance abuse.

### *Psychiatric History*

According to the DDIS scoring criteria, this subsection does not produce a specific score, but rather is used for assessment data. The results show that 2 subjects (out of a total of 55) have been diagnosed with a depressive disorder. In Ross, et al ([1989](#)) study of 236 cases of DID in adult patients (with an average age of 30.8 years), the patients were generally identified as having comorbidities other than DID of 2.74. Data from Ross et al. ([1989](#)) are not replicated in this study. There are two possible causes. First, all research subjects in Nias come from families with small socioeconomic conditions so they do not have access to psychiatric services. All research subjects in Nias were in the adolescent age range, so that DID and other comorbid disorders are not yet apparent.

### *Major Depressive Disorder*

Based on the scoring criteria, to be identified as having major depressive disorder (MDD), subjects must answer positively to question 54 and at least 4 questions from question 55-62. The results show that 27 subjects (49%) were identified as having MDD.

### *Schneiderian First Rank Symptoms*

In this subsection, what is calculated is the number of positive symptoms of schizophrenia reported by the subject. Ross et al. ([2016](#)) noted that out of 100 study subjects, the mean positive symptom reported by the subject was 6.5, while in this study, the mean positive symptom reported by the subject was 3.82. This difference in results seems to be influenced by the age difference of the study subjects. In Ross's ([2016](#)) study, the mean age of the subjects was 40.2 years, whereas, in this study, the



mean age of the subjects was 14.5 years. Psychotic symptoms will be stronger when individuals do not get continuous treatment in line with increasing age.

The results of this study also show that 8 subjects (14.5%) reported zero symptoms of schizophrenia. These findings indicate that there is a possibility that possession symptoms are not always associated with psychotic symptoms.

#### *Trances, Sleepwalking, Childhood Companions*

The results of this study show that 38 subjects (69%) reported having experienced trance, 17 subjects (31%) had had imaginary friends, and 6 subjects (11%) had sleepwalking. These findings indicate that of the three symptoms above, there is a strong indication that trance has the greatest relationship with possessions compared to the other two symptoms.

#### *Childhood Abuse*

The results of this study indicate that 19 subjects (35%) reported having experienced physical abuse, 5 subjects (9%) reported having experienced sexual abuse, and 3 subjects (5.4%) reported having experienced physical and sexual abuse. A total of 21 subjects (38.18%) reported experiencing physical and/or sexual abuse.

#### *Features Associated with Dissociative Identity Disorder*

The results show that the average number of dissociative identity disorder (DID) positive symptoms reported by subjects was 6.3 symptoms (out of a total of 12 positive DID symptoms).

#### *Supernatural/ Possession/ ESP/ Cult Experiences*

The results show that the average number of positive symptoms reported by subjects was 2.65 (out of a total of 6 symptoms).



### *Borderline Personality Disorder*

According to the manual of DDIS-DSM-5 (Ross, [2019](#)), the diagnosis of BPD can be established if there are at least 5 positive answers from the subjects for questions number 108-116. The results of this study indicate that 26 subjects (47.2%) were diagnosed with BPD. The mean number of positive symptoms reported by each subject was 4.16. These findings indicate that borderline personality disorder has a strong relationship with the phenomenon of possession.

### *Dissociative Amnesia*

According to the manual of DDIS-DSM-5 (Ross, [2019](#)), the diagnosis of dissociative amnesia can be established if the subjects answer "Yes" to items 117 and 119, and answer "No" to item 118. The results of this study indicate that 8 subjects (14.54%) met the diagnostic criteria of dissociative amnesia.

### *Dissociative Fugue*

According to the manual of DDIS-DSM-5 (Ross, [2019](#)), the diagnosis of a dissociative fugue can be established if the subjects answer "Yes" to items 120, 121, and 123; and answer "No" to item 122. The results of this study indicate that 4 subjects (7.27%) met the dissociative fugue criteria.

### *Depersonalization/ Derealization Disorder*

According to the manual of DDIS-DSM-5 (Ross, [2019](#)), the diagnosis of a dissociative fugue can be established if the subjects answer "Yes" to items 124 and 126; and answer "No" for item 125. The results of this study indicate that 2 subjects (3.63%) met the diagnostic criteria for depersonalization/derealization disorder.





### *Dissociative Identity Disorder*

According to the manual of DDIS-DSM-5 (Ross, [2019](#)), to be able to meet the DID criteria, the subjects must answer "Yes" to question 127-129, and negative to question number 130. The results show that there were 3 subjects (5.45%) that met the DID criteria.

### *Dissociative Disorder Not Otherwise Specified (DSM-IV DDNOS); called Other Specified Dissociative Disorder or Unspecified Dissociative Disorder in DSM-5*

The results of this study indicate that there were 6 subjects (11%) who meet the DDNOS criteria.

### *Concluding Item*

The results of this study indicate that there were 7 subjects (13%) who show idiosyncratic thinking.



**Table I.**  
*Summary of Descriptive Data from DDIS-DSM-5 Interviews*

Item	Information (in percentages)
Number of subjects	55
Average age (years)	14.51
Percentage of men	23.63
Percentage of women	76.37
Percentage of those experiencing somatization disorder	98.18
The average positive symptom of somatization disorder	10.82 (of total 34)
Percentage of those experiencing substance abuse	3.63
Percentage of those having a psychiatric history	3.63
Percentage of those having major depressive disorder	49
Average positive symptoms of Schneiderian first rank	3.82 (of 11 total)
Percentage of those experiencing trances	69
Percentage of those having a companion	31
Percentage of those experiencing sleepwalking	11
Percentage of those experiencing childhood physical abuse	35
Percentage of those experiencing childhood sexual abuse	9
Percentage of those experiencing childhood physical AND sexual abuse	5.4
Average positive symptoms of dissociative identity disorder	6.3 (of total 12)
Average positive symptoms of supernatural /possession/ESP/cult experience	2.65 (of total 6)
Percentage of those having a borderline personality disorder	47,2
Average positive symptoms of borderline personality disorder	4,16
Percentage of those having dissociative amnesia	14,54
Percentage of those experiencing dissociative fugue	7,27
Percentage of those experiencing depersonalization/ derealization disorder	3,63
Percentage of those experiencing dissociative identity disorder	5,45
Percentage of those experiencing other specified dissociative disorder or unspecified dissociative disorder	11
Percentage of those showing idiosyncratic thinking	13



**Table 2.**

*Disorder Symptoms Based on the Percentage of Participants who Experienced the Symptoms (Cut-Off Score Of 50%)*

Disorder	Symptom	Percentage of participants
Somatic complaints	Headache	78%
	Palpitations	71%
	Dizzy	89%
	Loss of voice	53%
	Blurred vision	56%
	Fainting or losing consciousness	65%
Major Depression Episodes	Difficulty concentrating and making decisions	55%
Positive Symptoms of Schizophrenia	Voices arguing in the head	62%
Trance	For a moment, staring at a space and forgetting time and losing awareness of what is happening around them	69%
Characteristics associated with dissociative identity disorder	Hearing voices that sometimes speak to the subject or speak in the subject's mind	58%
Supernatural experience	Ever felt possessed by a demon	73%
	Ever felt possessed by someone who has died	67%
	Ever felt having contact with the devil	56%
Borderline personality disorder	In general, have a pattern of deep but unstable personal relationships that are characterized by changes in feelings between positive extremes and negative extremes	64%
	Lack of control over anger	69%
	Frequent mood changes, from normal feelings to sad or angry or anxious	64%
	Feeling depressed and sometimes being paranoid	53%

**BDI Results**

The number of research subjects who filled out the BDI questionnaire was 49 students. Based on the questionnaire results, the following results were obtained:

**Table 3.**

*Categories of BDI Filling by Subjects*

Category	Number of Subjects	Percentage
Normal	10	20,4%
Mild Mood Disorder	14	28,6%
Clinical Depression Cutoff	6	12,2%
Moderate Depression	13	26,5%
Severe depression	5	10,2%
Extreme depression	1	2,1%

*WBFRS results*



**Figure 1.** WBFRS Measurement Tool

The number of subjects filling the WBFRS measurement tool is 49 subjects. Based on the WBFRS measurement results above, the following results were obtained:



**Table 4.**

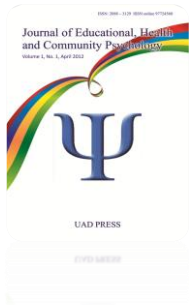
*WBFRS Measurement Results*

Category	Number of Subjects	Percentage
Not hurt	19	38,8%
Hurts A Little Bit	10	20,4%
Hurts A Little More	15	30,6%
Hurts Even More	1	2,1%
Hurts A Whole Lot	1	2,1%
Hurts Worst	3	6%

## Discussion

This study aims to identify symptoms in individuals affected by *kesurupan*, a cultural concept of distress among Indonesians related to mass psychogenic illnesses. The findings indicate that those experiencing dissociative trance showed symptoms associated with several mental disorders, including somatization disorder (reported by 98% of subjects), borderline personality disorder (47%), trance (69%), and major depressive disorder (50%). Additionally, 35% of subjects reported a history of childhood physical abuse, supporting the link between childhood trauma and paranormal experiences (Ross, [1992](#); Berkowski & MacDonald, [2014](#)). However, these findings do not align with the perspective that "spirit possession" is predominantly dissociative in nature (Ross, [2011](#), [2013](#)).

Analysis of DDIS indicates that primary symptoms are somatization (experienced by 98.18% of subjects), major depression (49%), trance (69%), childhood physical abuse (35%), borderline personality disorder (47.2%). However, less than 15% of subjects fit into the diagnostic criterion of having dissociative identity disorder. Further analysis of BDI revealed that almost half-third of the informants are experiencing moderate to severe depression. However, as the WBFRS showed, the pain experienced by the subjects seems to be more psychological in nature, similar to the "feeling of extreme pain" as reported by Rahardanto and Subandi ([2012](#)) in their previous study of individuals who experience pathological possession.



The more detailed analysis shows that the highest symptom of somatization is dizziness (experienced by 89% of subjects), headache (78%), palpitations (71%), and loss of consciousness (65%). A more detailed analysis of the depressive disorders experienced by the subjects shows that the highest symptom is difficulty concentrating and making decisions (experienced by 55% of subjects).

Detailed analysis of the dimensions of the supernatural experience shows that 73% of subjects experienced being possessed by demons. This attribution is quite common in countries where mysticism is still prevalent, whereas in Western countries, mass dissociation is often attributed to natural causes (for example drug or chemical poisoning — see Bartholomew & Sirois, [2000](#); Cortes & Gatti, 1984).

Based on the analysis of the DDIS questionnaire, it can be derived that there are 17 symptoms found in the possessed individuals. Of those symptoms, six are physical; most frequent are headaches, dizziness, and loss of consciousness. The causes of these physical symptoms were likely biological (such as not having breakfast before going to school), and can also be related to problems faced by the subjects in their daily lives (socioeconomic, family, and problems related to the development of adolescence).

It is also important to note that although the 17 symptoms above are identified from 7 aspects (out of a total of 15 aspects), the emergence of the above symptoms in individuals prone to experience spirit possession by no means indicates the existence of psychiatric disorders ascribed to the symptoms. This is especially important for aspects that are only represented by a single symptom. Diagnosis of psychiatric disorder must meet a minimum number of symptoms according to the criterion in the DSM-5. Therefore, the 17 symptoms experienced by the subjects must be seen as a single symptom associated with disorders in susceptible individuals possessed, not as a distinct mental disorder. In general, the results of filling DDIS, BDI, and WBFERS measuring instruments by research subjects are mutually supportive of one another. This is in line with previous studies which show that possession

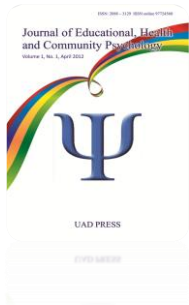
does not seem to be limited to a phenomenon of dissociation, but rather comorbidity with symptoms of depression and schizophrenic tendencies (Rahardanto & Subandi, [2012](#)). This is indicated by the presence of depressive symptoms in research subjects as a result of DDIS contents in the form of concentration problems and difficulty in making decisions. Although there is only one symptom, this is in line with the results of BDI analysis which shows that most of the subjects experienced mild and moderate depression. This mild and moderate depressive condition is likely to cause most of the subjects on filling WBFRS items to report experiencing no hurting feelings.

Follow-up interviews with the students who experienced possession revealed that before experiencing possession episode, the students reported having dizziness, headaches, and loss of consciousness or fainting. Previous research identified similar findings (Rahardanto & Subandi, [2012](#); Southard & Southard, [1986](#)).

The gravity of psychological problems in the students' daily lives (extreme poverty, domestic abuse, and problems with peers) can aggravate some of the students' borderline personality tendencies. Based on psychoanalytic theory, the "spirit possession" episode enables the students to vent impulses otherwise unacceptable within societal norms. The spirits are to be blamed for the students' actions—it is the spirits who speak, shout, curse, and berate. Thus the state of being "possessed" provides a safe channel to express desires, anger, hatred, or criticism of society otherwise inexpressible due to societal norms.

### **Limitations of the Study**

There may be language barriers, as most of the students use a certain dialect (Nias dialect) that is different from the Javanese dialect used by the interviewers. The interviewees, of whom the majority are coming from low socioeconomic statuses, may experience difficulty to comprehend the questions



asked by the interviewers. The difficulty may further be aggravated by the students' diminishing concentration, as most of the data-collection process occurred in the mid-afternoon.

### Funding

The authors have received funding from the Indonesian Ministry of Higher Education Grant Grant for Basic Research 2018 – 2020. To conduct field research in Nias, North Sumatra, as an effort to gain a better understanding of the mass dissociative phenomenon that occurs there, as the findings may be extrapolated to gain a wider understanding of the many cases of mass dissociative phenomenon occurs in many parts of Indonesia.

### Public interest statement

Mass psychogenic illness, in the form locally known as *kesurupan* (“spirit possession”), occurs every year in Indonesia. In various countries around the world, this phenomenon has also been identified repeatedly. However, the nature and diagnostic criteria of this phenomenon are still being debated today. Unfortunately, diagnostic inaccuracy leads to inappropriate intervention. This study aims to provide insights about the symptoms of trance, at least in the local Indonesian context, which can be used as a reference for designing a culture-sensitive approach for mass psychogenic illness cases.

### Competing interest:

The authors declare no competing interest.

### References

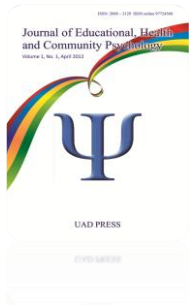
- Bartholomew, R.E., Sirois, F. (2000). Occupational mass psychogenic illness: A transcultural perspective. *Transcultural Psychiatry*, 37, 495-524. doi: [10.1177/136346150003700402](https://doi.org/10.1177/136346150003700402)
- Berkowski, M., & MacDonald, D.A. (2014). Childhood trauma and the development of paranormal beliefs. *The Journal of Nervous and Mental Disease*, 202(4), 305–312. doi: [10.1097/NMD.000000000000123](https://doi.org/10.1097/NMD.000000000000123)





- Bhavsar, V., Ventriglio, A., & Bhugra, D. (2016). Dissociative trance and spirit possession: Challenges for cultures-in-transition. *Psychiatry and Clinical Neurosciences*, 70(12), 368. <https://doi.org/doi:10.1002/pcn.12425>
- Bulatao, J. (1980). The altered state of consciousness and the spiritual exercises of St. Ignatius. *Philippine Studies*, 28, 74-85.
- Bulatao, J. (1982). Local cases of possession and their cure. *Philippine Studies*, 30, 415-425.
- Bulatao, J. (1986). A note on Philippine possession and poltergeist. *Philippine Studies*, 34, 86-101.
- Cortés, J.B., Gatti, F.M. (1984). *The case against possessions and exorcisms: A historical, biblical, and psychological analysis of demons, devils, and demoniacs*. New York: Vantage Press.
- Delmonte, R., Lucchetti, G., Moreira-Almeida, A., & Farias, M. (2016). Can the DSM-5 differentiate between nonpathological possession and dissociative identity disorder? A case study from an Afro-Brazilian religion. *Journal of Trauma and Dissociation*, 17(3), 322–337. <https://doi.org/10.1080/15299732.2015.1103351>
- During, H.E., Elahi, F.M., Taieb, O., Moro, M., Baubet, T. (2011). A critical review of dissociative trance and possession disorders: Etiological, diagnostic, therapeutic, and nosological issues. *Can J Psychiatry*, 56(4), 235-242. [doi: 10.1177/070674371105600407](https://doi.org/10.1177/070674371105600407)
- Ejizu, C.I. (1991). Cosmological perspective on exorcism and prayer-healing in contemporary Nigeria. *Journal of the International Association for Mission Studies*, VIII(2), 165-176. [doi: 10.1163/157338391X00145](https://doi.org/10.1163/157338391X00145)
- Ferracuti, S., Sacco, R., Lazzari, R. (1996). Dissociative trance disorder: Clinical and Rorschach findings in ten persons reporting demon possession and treated by exorcism. *Journal of Personality Assessment*, 66(3), 325-539. [doi: 10.1207/s15327752jpa6603\\_4](https://doi.org/10.1207/s15327752jpa6603_4)
- Ferrándiz, F. (2004). The body as a wound: Possession, *malandros*, and everyday violence in Venezuela. *Critique of Anthropology*, 24(2), 107-133. [doi: 10.1177/0308275X04042649](https://doi.org/10.1177/0308275X04042649)
- Geertz, C. (1964). *The religion of Java*. The University of Chicago Press.
- Hayes, K.E. (2006). Caught in the crossfire: Considering the limits of spirit possession. A Brazilian case study. *Culture and Religion*, 7(2), 155-175. [doi: 10.1080/14755610600975910](https://doi.org/10.1080/14755610600975910)
- Hecker, T., Braitmayer, L., & van Duijl, M. (2015). Global mental health and trauma exposure: The current evidence for the relationship between traumatic experiences and spirit possession. *European Journal of Psychotraumatology*, 6(July 2017). <https://doi.org/10.3402/ejpt.v6.29126>
- Hoare, F. (2004). A pastoral approach to spirit possession and witchcraft manifestations among the Fijian people. *Journal of the International Association for Mission Studies*, 21(1), 113-137. [doi: 10.1163/1573383041154375](https://doi.org/10.1163/1573383041154375)
- Hollan, D. (2000). Culture and dissociation in Toraja. *Transcultural Psychiatry*, 37(4), 545-559. [doi: 10.1177/136346150003700404](https://doi.org/10.1177/136346150003700404)

- Igwe, L. (2012). *Combating exorcism-related abuses*. Downloaded 26 November 2014, from <http://saharareporters.com/2012/09/26/combating-exorcism-related-abuses-leo-igwe>
- Lemelson, R., Suryani, L.K. (2006). The spirits, *ngeb*, and the social suppression of memory: A complex clinical case from Bali. *Culture, Medicine, and Psychiatry*, 30, 389-413. doi: [10.1007/s11013-006-9026-y](https://doi.org/10.1007/s11013-006-9026-y)
- Mattoo, S.V., Gupta, N., Lobana, A., Bedi, B. (2002). Mass family hysteria: A report from India. *Psychiatry and Clinical Neurosciences*, 56, 643-646. doi: [10.1046/j.1440-1819.2002.01069.x](https://doi.org/10.1046/j.1440-1819.2002.01069.x)
- Ng, Beng-Yeong. (2000). Phenomenology of trance states seen at a psychiatric hospital in Singapore: A cross-cultural perspective. *Transcultural Psychiatry*, 37(4), 560-579. doi: [10.1177/136346150003700405](https://doi.org/10.1177/136346150003700405)
- Oger, L. (1996). The pastoral approach to spirit possession: a Zambian case. *African Ecclesial Review*, 38(1), 274-290.
- Padmanabhan, D. (2017). From distress to disease: A critique of the medicalisation of possession in DSM-5. *Anthropology and Medicine*, 24(3), 261-275. <https://doi.org/10.1080/13648470.2017.1389168>
- Paris, J. (1996). Review-essay: Dissociative symptoms, dissociative disorders, and cultural psychiatry. *Transcultural psychiatric research review*, 33(1), 56-68. doi: [10.1177/136346159603300104](https://doi.org/10.1177/136346159603300104)
- Rahardanto, M.S., Subandi. (2011). Dari rasa sakit yang mencekam hingga sukacita yang meluap-luap: Dinamika psikologis individu yang mengalami kesurupan. *Unpublished graduate thesis*. Yogyakarta: Universitas Gadjah Mada.
- Rahardanto, M.S., Subandi. (2012). From acute pain to intense elation: The psychological dynamics of five individuals who experienced spirit possession. *Jurnal Psikologi*. 39(1), 25-45. Downloaded from <https://jurnal.ugm.ac.id/jpsi/article/view/6965/5426>
- Razali, S.M. (1999). Dissociative trance disorder: A case report. *Eastern Journal of Medicine*, 4(2), 83-84.
- Ross, C.A., Norton, G.R., Wozney, K. (1989). Multiple personality disorder: An analysis of 236 cases. *Can. J. Psychiatry*, 34(5), 413-418. doi: [10.1177/070674378903400509](https://doi.org/10.1177/070674378903400509)
- Ross, C.A., & Joshi, S. (1992). Paranormal experiences in the general population. *The Journal of Nervous and Mental Disease*, 180(6), 357-361. doi: [10.1097/00005053-199206000-00004](https://doi.org/10.1097/00005053-199206000-00004)
- Ross, C.A. (2011). Possession experiences in dissociative identity disorder: A preliminary study. *Journal of Trauma and Dissociation*, 12, 393-400. doi: [10.1080/15299732.2011.573762](https://doi.org/10.1080/15299732.2011.573762)
- Ross, C.A., Schroeder, E., & Ness, L. (2013). Dissociation and symptoms of culture-bound syndromes in North America: A preliminary study. *Journal of Trauma & Dissociation*, 14(2), 224-235. doi: [10.1080/15299732.2013.724338](https://doi.org/10.1080/15299732.2013.724338)
- Ross, C.A., Browning, E. (2016). The self-report Dissociative Disorders Interview Schedule: A preliminary report. *Journal of Trauma and Dissociation*, doi: [10.1080/15299732.2016.1172538](https://doi.org/10.1080/15299732.2016.1172538)



- Ross, C.A. (2019). Scoring the Dissociative Disorders Interview Schedule-DSM-5 version. From <https://www.rossinst.com/Downloads/DDIS-DSM-5-Scoring-Rules.pdf>
- Sethi, S., Bargava, S.C. (2009). *Mass possession state in a family setting*. *Transcultural Psychiatry*, 46(2), 372-374. doi: [10.1177/1363461509105828](https://doi.org/10.1177/1363461509105828)
- Somer, E. (2004). Trance possession disorder in Judaism: Sixteenth-century *dybbuks* in the Near East. *Journal of Trauma and Dissociation*, 5(2), 131-146. doi: [10.1300/J229v05n02\\_07](https://doi.org/10.1300/J229v05n02_07)
- Somer, E., Saadon, M. (2000). Stambali: Dissociative possession and trance in a Tunisian healing dance. *Transcultural Psychiatry*, 37, 580-600. doi: [10.1177/136346150003700406](https://doi.org/10.1177/136346150003700406)
- Southard & Southard (1986). Demonizing and mental illness. *The East Asia Journal of Theology*, 4(2), 170-183.
- Springate, L.A.C. (2009). Kuda lumping dan fenomena kesurupan massal: Dua studi kasus tentang kesurupan dalam kebudayaan Jawa (Horse dance and mass spirit possession: Two case studies of spirit possession in Javanese Culture). *Research Report of Australian Consortium for In-Country Indonesian Studies*. Muhammadiyah University: Malang.
- Stange, P.D. (1979). Configurations of Javanese possession experience. *Religious Traditions*, 2(2), 39- 54.
- Van Duijl, M., Cardena, E., De Jong, J.T.V. (2014). Unraveling the spirits' message: a study of help-seeking steps and explanatory models among patients suffering from spirit possession in Uganda. *International Journal of Mental Health Systems*, 8(1), 24 . doi: [10.1186/1752-4458-8-24](https://doi.org/10.1186/1752-4458-8-24)
- Van Duijl, M., Cardena, E., De Jong, J.T.V. (2005). The validity of DSM-IV dissociative disorders in South-West Uganda. *Transcultural Psychiatry*, 42(2), 219-241. doi: [10.1177/1363461505052666](https://doi.org/10.1177/1363461505052666)
- Varma, V.K., Bouri, M., Wig, N.N. (1981). Multiple personality in India: Comparison with hysterical possession state. *American Journal of Psychotherapy*, 35(1), 113-120. doi: [10.1176/appi.psychotherapy.1981.35.1.113](https://doi.org/10.1176/appi.psychotherapy.1981.35.1.113)
- Verginer, L., & Juen, B. H. (2019). Spiritual explanatory models of mental illness in West Nile, Uganda. *Journal of Cross-Cultural Psychology*, 50(2), 233–253. <https://doi.org/10.1177/0022022118813652>
- Wicaksana, I. (2008). *Mereka bilang aku sakit jiwa: Refleksi kasus-kasus psikiatri dan problematika kesehatan jiwa di Indonesia* (They told me I'm crazy: Reflections of psychiatric cases and mental illness problems in Indonesia). Yogyakarta: Kanisius.
- Witztum E., Buchbinder, J.T., van der Hart, O. (1990). Summoning a punishing angel: Treatment of a depressed patient with dissociative features. *Bulletin of the Menninger Clinic*, 54(45), 524-537.