

ACCIDENTAL VS. DELIBERATE OVERDOSE ADMISSIONS TO THE EMERGENCY DEPARTMENT IN BALI'S LARGEST HOSPITAL - A LOOK INTO THE EFFECTS OF MENTAL HEALTH ON INDONESIA'S SUBSTANCE ABUSE PROBLEM

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Abstract

Background: Mental health care in Indonesia is under-resourced, drugs are easily available, and alcohol use is rising, increasing the risk of accidental and deliberate overdose. **Aims:** Identify the demographics of overdose patients presenting to the emergency department. Determine: the substances commonly used in overdose; the percentage of accidental vs. deliberate overdoses; the psychiatric history of overdose patients; the reasons behind the overdoses occurring. **Methods:** 22 overdose patients over the age of 18 that had presented to the emergency department at the RSUP Sanglah Hospital in a 1-year period were included in the study. Data was collected from records kept by the hospital on gender, age, nationality, substance(s) used in overdose, presence of psychiatric disorder, whether the overdose was accidental or deliberate, and the reason behind the overdose. Microsoft Excel was used to collect and analyse the data. **Results:** Overdoses were predominantly carried out by male Indonesians aged 25-34. Alcohol was the most common substance used (n=5, 22.7%). 55.5% (n=12) of overdoses were accidental and 45.5% (n=10) were deliberate. 3 out of 22 patients had a diagnosed mental disorder. Unknown quantity consumed; unknown content consumed; over-consumption; and spiked drink caused accidental overdose. Suicidality and family issues caused deliberate overdose. **Conclusions:** Overdose rates were lower than expected. Accidental overdoses are likely due to easy access to substances, and a fear of retribution preventing admission to hospital. The high deliberate overdose rate plus low mental disorder rate suggests patients reach a mental-health crisis point before being diagnosed with a mental disorder

Keywords: Mental Health; Overdose; Accidental Overdose; Deliberate Overdose; Substance Abuse; Mental Illness.

INTRODUCTION

In Indonesia, modern psychiatry has only come into focus in the past decade or so due to the growing use of narcotics and psychotropics in Indonesian young people [1]. In 2017, Indonesia's president declared a national alert over drug use, and recognised that mental health is a serious problem for the nation. The prevalence of heavy episodic drinking was 6.5% of the population above 15 years of age in 2016 and, while alcohol use is currently low in Indonesia, total alcohol per capita consumption is set to rise highest in the South East Asia region [2]. The prevalence of severe psychiatric disorders (psychosis/schizophrenia) is around 0.5%; and mental emotional disorders (depression and anxiety) is 11.6% [1]. Poor mental health is linked with substance misuse and vice versa [3].

Overdose (or "intoksikasi" in Indonesian) can be classified as accidental or deliberate. Accidental overdoses occur when a substance (alcohol or a drug) is taken unknowingly, or too much of a substance is accidentally consumed, or the wrong substance was taken or given in error [4]. Drugs in Indonesia are rife [5] and there is a lack of information on what drugs are

and how to take them safely due to the strict criminality of drug use. One lifestyle writer states:

"Indonesians do not see any differences between soft and hard drugs. They have no idea what drugs are, how they work, which ones are lethal and which ones are addictive." [6]

Alternately, deliberate overdoses occur where individuals knowingly take an excessive quantity or combination of substances in order to harm themselves or commit suicide [4]. With only 900 psychiatrists for 250 million people [7], mental health services in Indonesia are so stretched that it is possible patients reach a mental health crisis point and opt to take their own lives without ever seeking help. The REAP-AD study found that 23% of depressed Indonesians suffer from suicidal thoughts/acts [8]. Mental disorder has been identified as a risk factor for suicide in Bali [9] and elsewhere in the world [10]. Kurihara and colleagues [11] found the suicide rate in Bali in 2006 to be 4.6 per 100,000 people, with 15% of the suicides occurring by poisoning. Additionally, the World Health Organisation states that alcohol causes 18% of suicides [12]. Furthermore, psychiatric intervention has been shown to reduce overdose readmission rates [13].

A literature search of the PubMed database was carried out, using the following terms: "overdose, drug abuse, drug misuse, substance abuse, substance misuse,

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suicide, Indonesia, Bali, mental illness, mental ill-health, mental disorder, mental health, psychiatry". The results were filtered to include only articles written in English and in the prior 20-year period. The results of the search were hand filtered by title, abstract, then article, and references from relevant articles were hand searched. This revealed a significant gap in research relating to suicide by overdose in the context of mental ill-health. In fact, suicide and mental health data for Indonesia is unavailable according to the World Health Organisation's Mental Health Atlas [14]. Currently, there are no studies looking at the risk factors for substance overdose in Indonesia. Data relating to substance misuse in general is scarce and its validity has been questioned: the National Narcotics Board has estimated drug use prevalence to be 2.6% in Indonesia [15], but Irwanto and colleagues have cited several reasons for these results not being valid [16]. The United Nations have published statistics on the prevalence of drug use in Indonesia, but the data is incomplete [15]. A review by Martins et al. highlighted the need for studies examining the correlation between overdose and psychiatric history in non-English-speaking countries [17].

Aims

Fundamentally, this study aims to identify whether overdoses in Bali are predominantly accidental or deliberate to gauge whether easy access to substances or poor mental health care is more of a problem for Indonesians.

In addition, this project aims to fill the knowledge gap regarding suicide and drug use seen in the literature by:

- I. Identifying the demographics of overdose patients presenting to the emergency department at the RSUP Sanglah General Hospital, Bali;
- II. Determining the substances commonly used in overdose;
- III. Determining the percentage of accidental vs. deliberate overdoses;
- IV. Determining whether overdose patients have a

psychiatric history;

- V. Determining the reasons behind the overdoses occurring.

Objectives

The overall objectives of this study are to lay a foundation for further research in this under-studied area, and act as a guide for future resource allocation: should the focus be on deterring substance misuse in general, or on providing more mental health services for those who need it?

MATERIALS AND METHODS

Study Design

A descriptive study.

Ethical Approval

Ethical approval was obtained through the medical electives process at the University of Aberdeen.

Participants

The psychiatry department at the RSUP Sanglah Hospital keeps a daily detailed record of all admissions to the emergency department that they review.

Sample Size

Twenty-three overdose patients were identified. One patient was excluded because there was inadequate data. Data from the records of twenty-two individuals over the age of eighteen were gathered and analysed.

Study Period

March 2018 (01/03/18) to February 2019 (28/02/19).

Methodology

Records from the one-year as mentioned period were searched for the following DSM-V codes (the system used in Indonesia) [18] (see Table 1).

Measures and Procedures

A data collection form was used to gather data from the records kept by the psychiatry department. Data was

Table 1. DSM-5 codes and their diagnostic classifications used to identify overdose patients.

DSM Code	Diagnostic Classification
F10.0	Acute intoxication due to alcohol
F11.0	Acute intoxication due to opioids
F12.0	Acute intoxication due to cannabinoids
F13.0	Acute intoxication due to sedatives or hypnotics
F14.0	Acute intoxication due to cocaine
F15.0	Acute intoxication due to other stimulants, including caffeine
F16.0	Acute intoxication due to hallucinogens
F17.0	Acute intoxication due to tobacco
F18.0	Acute intoxication due to volatile solvents
F19.0	Acute intoxication due to multiple-drug use and use of other psychoactive substances

collected on gender, age, nationality, substance(s) used in overdose, presence of psychiatric disorder, whether the overdose was accidental or deliberate, and the reason behind the overdose. The records were translated from Indonesian into English by an English-speaking medical student working in the psychiatry department.

Definition

Overdose was defined using the DSM-5 definition for Acute Intoxication:

“A transient condition following the administration of alcohol or other psychoactive substance, resulting in disturbances in level of consciousness, cognition, perception, affect or behaviour, or other psychophysiological functions and responses.” [18]

The type of overdose was classified as accidental if the patient had no intent of harming themselves or committing suicide. The overdose was classified as deliberate if there was suicidal intent or intent to harm. Both drugs and alcohol are included under the term “substance” in this study.

Analysis

Microsoft Excel was used to collect and analyse the data.

RESULTS

Demographics

The majority of the patients included in the study were male. The age ranged from nineteen to sixty, with thirty

–one being the average. Most patients were Indonesian nationals, with Australia being the second most common nationality. One patient came from each of America, Germany, the Netherlands, the UK and Pakistan. See Table 2 for details.

Table 2. Patient demographics.

Participants		N	%
Gender	Male	14	63.6
	Female	8	36.4
Age (years)	18-24	7	31.8
	25-34	8	36.4
	35-44	4	18.2
	45-54	2	9.1
	55-64	1	4.5
	64+	0	0.0
Nationality	Indonesia	14	63.6
	Australia	3	13.6
	America	1	4.5
	Germany	1	4.5
	Netherlands	1	4.5
	Pakistan	1	4.5
	UK	1	4.5

Substances Used in Overdose

In the majority (n=18, 81.8%), only one substance was used in overdose. In four (18.2%), two substances were used, with alcohol most commonly being mixed with another substances (see Table 3 for details of substances used in overdose). No patients used more than two substances. Alcohol was the most commonly used substance.

Table 3. Substances used in overdose categorised according to DSM-5 diagnostic classifications in Table 1 and specific substances used.

DSM-5 Category	Specific Substance(s)	N	%
Alcohol		5	22.7
Opioids	Tramadol	1	4.5
Cannabinoids		0	0.0
Sedatives or hypnotics	Benzodiazepines	1	4.5
Cocaine		0	0.0
Other stimulants	Amphetamines	1	4.5
	Methamphetamine	3	13.6
Hallucinogens	“Magic coffee”	1	4.5
Tobacco		0	0.0
Volatile solvents	Rat poison	1	4.5
	Liquified petroleum gas	1	4.5
	Bleach	1	4.5
Multiple drug use and use of other psychoactive substances	Alcohol + amphetamine	1	4.5
	Alcohol + ecstasy	1	4.5
	Alcohol + unknown pill	1	4.5
	Methamphetamine + ecstasy	1	4.5
	Cough syrup	1	4.5
	Dimenhydrinate (antihistamine)	1	4.5
Unknown		1	4.5

Percentage of Accidental vs. Deliberate Overdoses

55.5% (n= 12) of overdoses were accidental and 45.5% (n=10) were deliberate (see Figure 1).

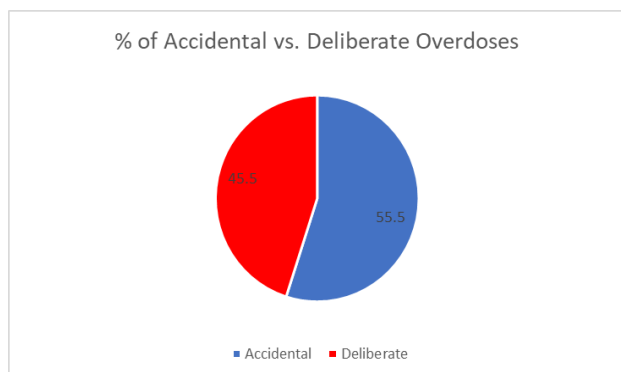


Figure 1. Percentage of accidental vs. deliberate overdoses.

Psychiatric History

Three out of the nineteen patients whose psychiatric history was known had a diagnosed mental disorder (see Table 4). Information on psychiatric history was unavailable for three patients.

Table 4. Percentage of patients with a diagnosed mental disorder.

Diagnosed mental disorder	N	%
Yes	3	13.6
No	16	72.8
Data unavailable	3	13.6

The majority of the patients had no psychiatric history. Of the ten patients who had taken a deliberate overdose, two had a diagnosed mental disorder, and psychiatric history was unavailable for one other. One of these patients deliberately consumed rat poison because he was suicidal due to depression. The patient who attempted suicide by consuming liquified petroleum gas had been diagnosed with an addiction disorder.

Of the twelve patients who had taken accidental overdoses, one had a diagnosed mental disorder (opioid addiction) and had taken an accidental overdose of tramadol because he had run out of methadone and was trying to substitute it. There was no psychiatric data available for two of the accidental overdose patients.

Reasons for Overdose

Accidental: The reasons for the accidental overdoses occurring were: unknown quantity of substances consumed; unknown content of substances consumed; consuming too many substances at a party; substituting one substance for another (tramadol for methadone) that is regularly taken; spiked drink; and consuming

large quantities of cough syrup to get a psychoactive effect.

Deliberate: Patients took deliberate overdoses because they were suicidal or had family issues.

DISCUSSION

Demographics

Overdoses were predominantly carried out by male Indonesians aged twenty-five to thirty-four. This is in accordance with statistics gathered by the United Nations Office on Drugs and Crime which found that the prevalence of drug use was higher amongst males than females in Indonesia [16].

Substances used in Overdose

Alcohol was the main substance used in overdose in this study, reflected by the fact that alcohol use is more prevalent than drug use in Indonesia [19].

The World Drug Report 2018 found that the most common primary drugs used among persons treated for drug problems in Indonesia in 2016 were stimulants (including methamphetamine, amphetamine and ecstasy) (69.4%) [16]. Cannabis was the next commonest (11.9%), followed by opioids (4.9%), other drugs (unspecified and miscellaneous) (3.9%) and sedatives (2.8%). Cocaine had the lowest use (0.1%) and there was no data for solvents/inhalants and hallucinogens [16]. These statistics are largely reflected by this study which found that stimulants were the most common drugs used in overdose (18.2%), followed by volatile substances (13.6%), other psychoactive substances (9.1%), opioids (4.5%), sedatives (4.5%), and hallucinogens (4.5%). There were no cases of cocaine use in this study and the lack of cannabis cases is due to serious cannabis intoxication being rare in adults [20].

Percentage of Accidental vs. Deliberate Overdoses

The rate of overdose is much lower than expected – only twenty-three over the course of one year. The number of overdoses on the whole is likely underrepresented as there were no records of the overdoses which resulted in death. Also, there are eight other hospitals in Bali and many medical clinics offering twenty-four emergency assistance. Patients may have presented to these instead of the RSUP Sanglah Hospital which is based in Bali’s capital city and is a tertiary centre.

The accidental overdose rate is likely lower than expected due to individuals not seeking help for fear of punishment. Drug laws in Indonesia are particularly strict, with severe penalties against their use and supply including life imprisonment and the death sentence [5]. Drug offences are treated primarily in a punitive rather than rehabilitative manner. With the criminalisation of drug use, drug users are driven away from health

services for fear of retribution [21].

The deliberate overdose rate, while low, makes up a large proportion of the overdoses (45.5%), though it may be underrepresented as most psychiatric patients are treated at a specialised psychiatric hospital in Bali and are not taken to the RSUP Sanglah Hospital for treatment. There are several factors that may be contributing to Indonesia's poor mental health, and therefore increasing the risk of deliberate overdose. These are: stigma of mental disease; lack of knowledge about psychiatric disease and the treatment options; lack of access to and poor quality of mental health services.

The stigma of mental illness inhibits Indonesian's from seeking and receiving professional treatment. Hartini and colleagues demonstrated that increased public knowledge of mental health reduces the stigmatic attitude towards it. They also found that familiarity with mental ill-health reduces stigma, married individuals are more tolerant of mental health, and younger people tend to be more stigmatising towards mental health than older individuals. The authors of this study recommend psychoeducational anti-stigma interventions which take into account sociodemographic factors [22].

Many Indonesians are unaware of what psychiatric illness actually is, much less the treatment options for mental ill-health. Psychiatry is a fairly modern concept in Indonesian history. Dutch colonialism brought modern psychiatry to the Dutch East Indies (Indonesia) in the late 19th century, and interest in and spending on psychiatry waxed and waned throughout the 20th century. The 1970s and 80s saw a surge of attention in mental health – the number of psychiatric hospitals in Indonesia more than doubled and psychiatric research was carried out. However, mental health care in the 1990s declined due to reductions in government spending. Awareness of mental disease is on the rise again due to the growing and problematic use of narcotics by young Indonesian's [1]. A study of the people of Garut, West Java, after the earthquake of 2009, found that they believed the causes of mental illness to be life problems, illicit substances, birth-related defects, accidents, inbreeding, supernatural forces, witchcraft, and lack of education. They only recognised severe mental illness symptoms, such as those exhibited by schizophrenics. Few recognised depression and anxiety as mental disorders [23].

Lack of access to and low quality of mental health care are potential risk factors for suicide. Due to the lack of physicians and psychiatrists in Indonesia, many people consult traditional healers (*dukun*) for their mental health problems [7]. In some areas, up to 80% of Indonesians will attend a physician only after visiting traditional healers or religious representatives first [1]. *Pasung* (shackling) is often commenced by families to protect the patient and those around them from the

violent behaviour of those who are seriously mentally ill, usually with schizophrenia. Studies have shown that greater than 76% of these individuals were unable to continue their treatment with the health services for various reasons, including low quality of the health service [1].

A psychosocial approach should be adopted to improve knowledge and contact with mental health patients. For example, Get Happy Indonesia [24], and Indonesia Mentality Care [25] are two non-profit organisations focusing on raising awareness about mental health. Indonesia's Health Planning Guidelines for 2015-2019 have identified the need for increasing access and quality of mental health services as part of their Healthcare Development Programme [1]. Educating traditional healers about psychiatric disease may be a means to increase mental health care availability.

Psychiatric History

The lack of psychiatric history for most of the deliberate overdose patients has been attributed to the same reasons as described above – stigma of mental disease; lack of knowledge about psychiatric disease and the treatment options; and lack of access to mental health services. It is postulated that these individuals reached a mental health crisis point before ever being diagnosed with a mental disorder. Latest figures show that nearly 90% of those who may need to access mental health services are unable to do so [26]. Additionally, attempts at deliberate overdose may have been carried out impulsively due to social circumstances (such as family issues) rather than mental disorder.

Reasons for Overdose

The broad reasons for accidental overdoses occurring in this study are unknown quantity consumed, unknown content consumed, over-consumption, and spiked drink. These reasons are in line with the causes of accidental overdose quoted in the literature [4].

Mental disorders, substance/alcohol misuse and an acute life event, among others, are risk factors for suicide in Asian countries [27]. This is reflected by suicidality and family issues being the reasons behind deliberate overdoses in this study. For the suicidal patients, reasons are not given for the suicidality (e.g. depression). Further research should look into the specific reasons for suicidal thoughts and behaviours that then lead to the consumption of a deliberate overdose.

Strengths and Limitations

The main strength of this study is that it is the first study examining the relationship between substance misuse and mental health in Indonesia. While small, it sets a precedent for further, larger studies which could be used to influence decision making when it comes to

resource allocation in health care.

The most important limitation of this study is its small sample size, meaning it has low statistical power and hence why no formal statistical testing was carried out. In addition, the study was only undertaken in one area of Indonesia and, although the ethnicity of the population is representative of the area, the lack of diversity may mean there is reduced generalisability to some areas. Furthermore, as a third party was used to interpret and translate the data, some records may have been missed due to misunderstanding of what patients should be included in this study.

CONCLUSIONS

Unexpectedly, overdose rates at the RSUP Sanglah Hospital, Bali, were lower than expected – only twenty-three over the course of one year. The proportion of accidental to deliberate overdoses is roughly equal: 55.5% vs 45.4% respectively. Accidental overdoses are likely due to easy access to substances, and a fear of retribution preventing admission to hospital. The high deliberate overdose rate plus low mental disorder rate suggests patients reach a mental-health crisis point before being diagnosed with a mental disorder. In order to reduce overdose rates, efforts must be made to reduce availability of drugs without having such harsh laws for drug users; and to reduce the stigma of mental illness, improve access to and quality of mental health care, and educate the public about the mental health services available to them.

As this study is the first of its kind in Indonesia, it is hoped that it highlights the need for further, more in-depth research into this area, and shows the significance of mental health care on drug use and overdose rates.

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REFERENCES

- [1] Tanra, A. and Roosdy, I. Challenges and Opportunity of Psychiatric Care in Indonesia. *Taiwanese Journal of Psychiatry*. 2017; 31(3).
- [2] World Health Organization. Global status report on alcohol and health 2018. eBook. <https://apps.who.int/iris/bitstream/handle/10665/274603/9789241565639-eng.pdf?ua=1>. Accessed on: 19 Mar. 2019.
- [3] Public Health England. Health matters: preventing drug misuse deaths. Online. <https://www.gov.uk/government/publications/health-matters-preventing-drug-misuse-deaths/health-matters-preventing-drug-misuse-deaths>. Accessed on: 1 Mar. 2019.
- [4] National Institute on Drug Abuse. Intentional vs. Unintentional Overdose Deaths. Online. <https://www.drugabuse.gov/related-topics/treatment/intentional-vs-unintentional-overdose-deaths>. Accessed on: 19 Mar. 2019.
- [5] Living In Indonesia Editorial Collective. Living in Indonesia | Illegal Drugs. Online. <http://livinginindonesia.info/item/illegal-drugs>. Accessed on: 20 Feb. 2019.
- [6] jakarta100bars.com. How Dangerous Is It to Use Drugs in Indonesia? Online. <http://www.jakarta100bars.com/2016/08/dangerous-drug-use-indonesia.html>. Accessed on: 20 Feb. 2019.
- [7] Pols, H. and Wibisono, S. Psychiatry and Mental Health Care in Indonesia from Colonial to Modern Times. *International and Cultural Psychology*. 2017. pp.205-221.
- [8] Park, S.C., Lee, M.S., Hahn, S.W., Si, T.M., Kanba, S., Chong, M.Y., Yoon, C.K., Udomratn, P., Tripathi, A., Sartorius, N. and Shinfuku, N. Suicidal thoughts/acts and clinical correlates in patients with depressive disorders in Asians: results from the REAP-AD study. *Acta neuropsychiatr*. 2016; 28(6): pp.337-345.
- [9] Kurihara, T., Kato, M., Reverger, R. and Tirta, I. Risk factors for suicide in Bali: a psychological autopsy study. *BMC Public Health*. 2009; 9(1).
- [10] Kurihara, T., Kato, M., Reverger, R. and Tirta, I. Suicide rate in Bali. *Psychiatry Clin Neurosci*. 2009; 63(5): pp.701-701.
- [11] Tobin, K.E. and Latkin, C.A. The relationship between depressive symptoms and nonfatal overdose among a sample of drug users in Baltimore, Maryland. *J Urban Health*. 2003; 80(2): pp.220-229.
- [12] World Health Organisation. Alcohol and health. eBook. https://www.who.int/substance_abuse/infographic_alcohol_2018.pdf?ua=1. Accessed on: 19 Mar. 2019.
- [13] Kanehara, A., Yamana, H., Yasunaga, H., Matsui, H., Ando, S., Okamura, T., Kumakura, Y., Fushimi, K. and Kasai, K. Psychiatric intervention and repeated admission to emergency centres due to drug overdose. *BJPsych Open*. 2015; 1(02): pp.158-163.

- [14] World Health Organisation. Mental Health Atlas 2011. eBook. https://www.who.int/mental_health/evidence/atlas/profiles/idn_mh_profile.pdf. Accessed on: 5 Feb. 2019.
- [15] Irwanto, Wirawan, D., Praptoraharjo, I., Irianto, S. and Mulia, S. Evidence-informed response to illicit drugs in Indonesia. *Lancet*. 2015; 385 (9984): pp.2249-2250.
- [16] United Nations Office on Drugs and Crime. Drug treatment in Asia | Statistics and Data. Online. <https://dataunodc.un.org/drugs/treatment/asia>. Accessed on: 24 Apr. 2019.
- [17] Martins, S.S., Sampson, L., Cerdá, M. and Galea, S. Worldwide prevalence and trends in unintentional drug overdose: a systematic review of the literature. *Am J Public Health*. 2015; 105 (11): pp.e29-e49.
- [18] American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5®). 2013.
- [19] World Health Organisation. ATLAS of Substance Use Disorders. Online. https://www.who.int/substance_abuse/publications/atlas_report/profiles/indonesia.pdf. Accessed on: 24 Apr. 2019.
- [20] Wang, G. Cannabis (marijuana): Acute intoxication. Online. <https://www.uptodate.com/contents/cannabis-marijuana-acute-intoxication>. Accessed on: 24 Apr. 2019.
- [21] Lai, G., Asmin, F. and Birgin, R. Drug Policy in Indonesia. eBook. <http://www.cahrproject.org/wp-content/uploads/2013/01/IDPC-Briefing-Paper-Drug-policy-in-Indonesia.pdf>. Accessed on: 20 Feb. 2019.
- [22] Hartini, N., Fardana, N.A., Ariana, A.D. and Wardana, N.D. Stigma toward people with mental health problems in Indonesia. *Psychol Res Behav Manag*. 2018; 11: p.535.
- [23] Bhugra, D., Tse, S., Ng, R. and Takei, N. eds. *Routledge handbook of psychiatry in Asia*. 2015.
- [24] Mental Health Innovation Network. Get Happy Indonesia. Online. <https://www.mhinnovation.net/organisations/get-happy-indonesia-0?mode=List/>. Accessed on: 21 Feb. 2019.
- [25] Mental Health Innovation Network. Indonesia Mentality Care. Online. <https://www.mhinnovation.net/organisations/indonesia-mentality-care>. Accessed on: 21 Feb. 2019.
- [26] Movement for Global Mental Health. Indonesia | 'Living in hell': mentally ill people in Indonesia chained and confined. Online. <http://globalmentalhealth.org/category/country/indonesia>. Accessed on: 21 Feb. 2019.
- [27] Chen, Y., Chien-Chang Wu, K., Yousuf, S. and Yip, P. Suicide in Asia: Opportunities and Challenges. *Epidemiol Rev*. 2011; 34(1): pp.129-144.