

# Relationship between Health Problem and Suicide Ideation among Correctional Officers

Mohd Razali Othman, Suraida Abdullah, Tasnim Mohd Taib\*,  
Nor Mazlina Ghazali and Nur Fatihah Abdullah Bandar

**Abstract---** *This study investigated the relationship between health problems and suicidal ideation amongst 157 correctional officers from three institutions of prison in Malaysia. The participants completed an online assessment to identify their problems and rule out suicidal ideation. Existence and severity of health problems were assessed by using Employee Needs Assessment Inventory (ENAI) whilst Interpersonal Needs Questionnaire (INQ) evaluates presence of suicide ideation. Overall, health problems were found to be positively related with suicide ideation ( $r=.210^{**}$ ,  $p<0,05$ ). Severity of health problems contributing to the feeling of thwarted belongingness and perceived burdensomeness measure it as a risk factor amongst personal problems addressed in ENAI. This research contributes to the exploration of health issues faced by correctional officers in Malaysia and how it affects their mental thoughts which can guide the development of interventions to help them to better cope and reduce the possible development of suicide ideation.*

**Keywords---** *Health Problems, Suicide Ideation, Correctional Officers, Employee Needs Assessment Inventory (ENAI), Interpersonal Needs Questionnaire (INQ).*

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## I. INTRODUCTION

Beginning 1980s, the trend of self-inflicted deaths within the law enforcement profession have been continuously arising (Violanti, 1995). Correctional officers are in the top 15 list of occupations with the highest incidence of workplace homicide (Stack & Tsoudis, 1997). Several factors leading to suicide amongst correctional officers include work issues (Lindquist & Whitehad, 1986; Stack & Tsoudis, 1997), family issues (Hsu, 2011; Zukri & Hassim, 2011) and health issues (Violanti, 1995; Violanti 2017). Correctional officers faced work issues being burnout and work dissatisfaction (Lindquist & Whitehad, 1986; Stack & Tsoudis, 1997), excessive workload from being understaffed (Zukri & Hassim, 2010) and workplace bullying (Stearns, 2017) whilst family issues include marital conflicts (Smith, 2015) and spouse, children and relative conflicts (Zukri & Hassim, 2010). Health issues faced by correctional officers include physical illnesses (Violanti, 1995) and alcohol abuse (Violanti, 2017). Though suicide within correctional officers total up to 39% higher than the rest of the working age population (Stack & Tsoudis, 1997), the phenomenon also occurs within other working and non-working adults (Dalglis, Melchior, Younes & Surkan, 2015).

Suicide can be said to be closely related to three elements of human operation namely cognitive, behaviour and affection (Shneidman, 2015). The cognitive aspect of suicide is called suicide ideation, the behaviour aspects of

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*Mohd Razali Othman, Universiti Malaysia Sarawak.  
Suraida Abdullah, Universiti Malaysia Sarawak.  
Tasnim Mohd Taib\*, Universiti Malaysia Sarawak. Email: tasnim.taib@gmail.com  
Nor Mazlina Ghazali, Universiti Malaysia Sarawak.  
Nur Fatihah Abdullah Bandar, Universiti Malaysia Sarawak.*

suicide is the act of implementing previously suicidal thoughts and affection aspects of suicide involved the mixture of negative emotions. Problems deferring in severity, influence one's thought process, attitude and feelings as such may bring an individual to negative thinking, behavior and emotion. Low self-esteem and low sense of mastery in facing one's pain may then bring one thought process to end the pain by ending one's life (Vilhjalmsson, Kristjansdottir & Sveinbjarnardottir, 1998).

Pain is associated with numerous physical and mental health conditions. Klonsky & May (2015) referred that different source of pain contribute differently to individual desire to live. Prior research has shown a link between pain and suicide (Fishbain, Lewis & Gao, 2014).

Physical pain is a consistent risk factor for suicidal thoughts and behaviors (Calati, Laglaoui Bakhiyi, Artero, Ilgen & Courtet, 2015). Suicide completion due to chronic pain was first mentioned in 1999 (Fishbain as cited in Racine, 2017). Rates of suicidal ideation were higher in those experiencing pain than those in the absence of pain (Calati, Laglaoui Bakhiyi, Artero, Ilgen & Courtet, 2015; Tang & Crane, 2006) and individuals with pain were more likely reported to have on-going suicidal ideation or have been continuously having suicidal ideation for a lifetime (Calati, Laglaoui Bakhiyi, Artero, Ilgen & Courtet, 2015). Tang & Crane (2006) reported that the prevalence of suicide ideation amongst individual with chronic pain is approximately 20%.

World Health Organisation (2019) reported that every year, nearly 800 000 people die to suicide. Adding up to the worldwide statistic, World Health Organisation estimated that by the year 2020, 1.53 million people or nearly 3% of all deaths in the world would be due to suicide. Thus, more focus and intervention are needed to reduce the statistic with suggestion to target prevention from high risk occupation such as correctional officers.

In the current study, we examine the relationship between health problems and suicide ideation. We hypothesized that individual who have problem in health condition would report greater likelihood of suicidal ideation than those who did not report any health problems. The health problems highlighted in this study include physical problems such as migraine, headache, backache, sleeping problem and weight problem as well as addiction to medicine, alcohol and drug. It is important to examine the linkage between health problems and suicide ideation in order to reach a deeper understanding on the influence of health towards suicidal thoughts as suicidal thoughts precedes attempts and when at critical stage a completed suicide. Early detection of detrimental health problems possible of becoming risk factors of suicide will allow development and formulation of affective suicide prevention programmes towards the targeted individuals.

## **II. METHOD**

### ***Participants and procedure***

The current study utilises correlational research design involving correctional officers in three institution of prison in Malaysia. All organizations participated were from the government sector. The researcher categorized 47 prison institutions across Malaysia based on its' location and zone - North Zone, South Zone, East Zone, Zone of Sabah and Zone of Sarawak. Three institutions were randomly selected covering East zone and Zone of Sarawak. A permission letter was sent out to the respective prison institutions. Once approved, informed consents and

questionnaires were then posted via online system and made available to the respondents. Prison counsellors assisted throughout the data collection. Once data is collected, participants with association to suicidal ideation totalling up to 258 were extracted from the database and further analysed for the purpose of this research.

### ***Instrument***

Employee Needs Assessment Inventory (Othman, Ghazali, Annuar, Ishak & Thomas, 2003) measuring health problems and Interpersonal Needs Questionnaire, INQ (Joiner, 2005) measuring suicide ideation were integrated in the online survey system. These health problems include physical problems such as migraine, headache, backache, sleeping problem and weight problem, and also addiction to medicine, alcohol and drug. The scale ranged from '1' (not relevant) to '5' (very critical). An example of one item is as follows: Sleeping problem ("I can't fall asleep, wake up in the middle of night and early morning"). 15 items measured suicide ideation with ordinal response metric ranging from 1 (not at all true for me) to 7 (very true for me). Of 15 items, nine measured thwarted belongingness (e.g. "These days, other people care about me") while six measured perceived burdensomeness (e.g. "These days, the people in my life would be better off if were gone").

### ***Data Collection and analysis***

The questionnaire was provided via an online survey system. The link to the system was mailed to the prison counsellors where they then distributed it to the correctional officers within their respective prison institution. Descriptive analyses were used to analyse the demographic factors and inferential analyses were used to examine the relationship between health problems and suicidal ideation. Data analysis was conducted using IBM SPSS version 25 where Pearson's correlation is conducted to obtain p-value, and correlation value. Pearson correlation measures the existence (given by a p-value) and strength (given by the coefficient  $r$  between -1 and +1) of a linear relationship between two variables (Samuels, & Gilchrist, 2015). Significant outcome means that a correlation exists where an absolute value of  $r$  of 0.1 is classified as weak, an absolute value of 0.3 is classified as moderate and of 0.5 is classified as strong (Cohen, 1988). Regression analysis was conducted to see which problem highly influence health condition and suicidal ideation.

## **III. RESULTS AND DISCUSSION**

There were more male ( $N=234$ , 90.7%) than females ( $N=24$ , 9.3%) and most were Muslim ( $N=234$ , 90.7%), followed by Christian ( $N=20$ , 7.8%), and Hindu ( $N=3$ , 1.2%). Majority of the participants were married ( $N = 197$ , 76.4%), followed by singles ( $N=57$ , 22.1%), and widows or widowed and divorced (both at  $N=2$ , 0.8%). The highest race were Malay ( $N=223$ , 86.4%). 4.3% ( $N=11$ ) were Bidayuh and of other races. There were also Iban ( $N=6$ , 2.3%) and equivalent Chinese and Indian (both at  $N=3$ , 1.2%). Lowest race calculated was Melanau ( $N=1$ , 0.4%). Hypothesis 1 which proposed that health problem positively related to suicide ideation ( $r=.444^{**}$ ,  $p<0,05$ ) was fully supported.

The significant finding of the study showed how of health issues was positively related to suicide ideation. The finding reaffirms prior research among non-psychiatric populations where health factors (Cheah, Azahadi, Phang & Manaf, 2018; Vilhjalmsson, Kristjansdottir & Sveinbjarnardottir, 1998), physical pain (Calati, Laglaoui Bakhiyi,

Artero, Ilgen & Courtet, 2015; Fishbain, Lewis & Gao, 2014; Van Orden & Conwell, 2011) and chronic pain (Racine, 2017; Smith, Edwards, Robinson & Dworkin, 2004; Tang & Crane, 2006) contributes to presence and development of suicidal ideation.

The top five health problems highly influencing the health condition found in the study are smoking ( $r=0.81$ ), sleep ( $r=0.78$ ), under or over weight ( $r=0.75$ ), migraine ( $r=0.73$ ) and inactive lifestyle ( $r=0.71$ ). Highest percentage nearing critical to very critical status by order are alcohol (42%), migraine (37%), under or overweight (34%), inactive lifestyle (33%) and smoking (32%). However individual health problems influence to suicide ideation differs. It is found that top five health problems highly influencing suicide ideation in the study are muscle tension and soreness ( $r=.234$ ), backache and loss of appetite (both  $r=.199$ ), substance addiction ( $r=.195$ ) and inactive lifestyle ( $r=.163$ ). This is followed by cold or cough ( $r=.131$ ), severe ache or pain ( $r=.128$ ), sleep ( $r=.126$ ), breath shortness ( $r=.105$ ) and pain on the left side of the chest ( $r=.90$ ).

It is visible that health problems contributing to physical pain (muscle tension and soreness, backache, severe ache or pain, breath shortness and pain on the left side of the chest) highly influence suicide ideation, followed by loss of appetite, substance addiction and inactive lifestyle, cold or cough and sleep. The pain condition lead to increased hopelessness, increased the feeling that they are a burden on others, decreased self-efficacy to manage themselves, increased social isolation and loss of social support that might, in turn, increase the risk of suicidal thoughts and behaviours. Perceived burdensomeness, one of mediator for suicide ideation happens through increased hopelessness and the feeling of being a burden upon others, and decreased self-efficacy to manage oneself. Thwarted belongingness, another mediator for suicide ideation happens through increased social isolation and loss of social support. Both presence of burdensomeness and thwarted belongingness triggers suicide ideation (Joiner, 2005).

One highly discussed health problem having the second biggest influence on overall health condition as well as a relatively high influence on suicidal ideation in this study is sleeping problem. Sleeping problem or medically diagnosed term insomnia has often to be found as major risk factor for suicidal thoughts and behaviour (Goodwin & Marusic, 2008; Wojnar, Ilgen, Wojnar, McCammon, Valenstein, & Brower, 2009). Severe sleeping problem has also been found to be related to perceived burdensomeness (Chu, Hom, Gallyer, Hammock & Joiner, 2019) and thwarted belongingness (Chu, Hom, Rogers, Ringer, Hames, Suh & Joiner, 2016). Kato (2014) found that although insomnia has an indirect effect on suicidal ideation, its' significant association towards depressive symptoms should be taken into account as depressive symptoms are strongly associated with suicidal ideation.

This study found that migraine problem accounted to second highest approaching critical to severely critical percentage (37%). Fuller-Thomson, Schrumm & Brennenstuhl (2013) shared how individuals who suffer from migraine often experience disruptions in their work and overall quality of life suggesting increased hopelessness, increased the feeling that they are a burden on others, decreased self-efficacy to manage themselves (feelings of perceived burdensomeness). They furthered that migraine also disrupts family and social activities which may bring in social isolation and loss of social support (feelings of thwarted belongingness). Suffering migraine is associated with both perceived burdensomeness and thwarted belongingness, mediators of suicide ideation. This is consistent with

previous study which explained that people who suffered with migraine have higher risk of suicidal ideation (Breslau et al., 1991; Ratchliffe et al., 2001; Breslau et al., 2012).

It is worth to note the influence of alcohol towards health condition influencing suicidal thought. Prevalent study has shown how alcohol has found to have an indirect effect on suicidal ideation towards firefighters (Gallyer, Dougherty, Gai, Stanley, Hom, Rogers, Duffy, Buchman-Schmitt, Spencer-Thomas & Joiner, 2018). Nonetheless, frequent alcohol uptake has been longly proposed as a risk to suicidal ideation amongst adult (Vilhjálmsón, Sveinbjarnardóttir & Kristjansdóttir, 1998; Violanti, 1995; Violanti 2017).

This study asked physical pain being such as migraine, headache, backache, sleeping problem and weight problem, and also addiction to medicine, alcohol and drug and the result shows a linkage between headache, backache, substance addiction and suicide ideation. Previous research supported this findings showing how severe pain through headache (Ilgen, Kleinberg, Ignacio, Bohnert, Valenstein, Mccarthy & Katz, 2008; Woolley, Fredman, Goethe, Lincoln & Heeren, 2008), backache, athritic pain (Ilgen et al., 2008; Ilgen, Zivin, McCammon & Valenstein, 2008) have been related to suicide ideation. Similar findings were also been found to show that suicide ideation have also been related to substance addiction (Elgin, 2014; Woolley, Fredman, Goethe, Lincoln & Heeren, 2008; You, Van Orden & Conner, 2011).

#### **IV. CONCLUSION**

The result indicated a significant positive correlation between health problems and suicide ideation among correctional officers. The top five problems that influence the overall health condition of a correctional officer include smoking, sleeping difficulty, under or over weight, migraine and inactive lifestyle. Problems in muscle tension and soreness, backache, loss of appetite, substance addiction, inactive lifestyle, cold or cough, severe ache or pain, sleeping difficulty, breath shortness and pain on the left side of the chest were the top 10 health problem listed to have an influence on suicidal ideation.

Future study on the relation between health problems and suicide ideation towards other high risk occupation, occupation showing prevalence of suicide cases and any occupation in general is suggested to further rule out and confirms specific health problems that have a high potential in becoming risk factor for suicide.

It is suggested that ENAI is used to rule out the health problems or other possible problems of individuals showing signs of suicidal thoughts and behaviours so that the root of the pain and stress possible of becoming risk factors for suicide can be determined. Identifying such problems during early can provide useful information for counsellor, health care practitioner and employer to create and develop intervention programs to assist individual to better cope and manage problems before it worsen threatening individual live.

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