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Original Research

Personality Traits and Suicide Behavior of Selected Filipino Adolescents

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***Abstract*:** Suicide and suicide behavior are major health concerns in our society today. Suicide has always been a sensitive topic, being considered taboo in many cultures and religions. Studies have shown that suicide and suicide behavior are linked to personality traits. The study aims to observe the relationship of the Five Factor Model personality traits with suicide behavior among Filipino adolescents, in order to determine the degree to which personality may correlate with suicide behavior. Participants were gathered from various universities in Metro Manila with ages ranging from 17-21. Results revealed that Neuroticism, Antagonism, Introversion, and Disinhibition (Low Conscientiousness) are correlated with suicide behavior. Moreover, forward stepwise regression indicated that Neuroticism, Antagonism, and Introversion were predictors of suicide behavior, with Neuroticism being the strongest predictor among the 5 domains. Results likewise showed that Depressivity (N3), which is a sub-factor of Neuroticism, is the strongest predictor of suicide behavior among the Five Factor Model facets.

Keywords: Suicide, suicide behavior, personality traits, adolescents

Introduction

According to the World Health Organization (WHO), over 800,000 people die by suicide every year, with one person dying every 40 seconds. It is the second leading cause of death among 15 to 29-year-olds; most of whom are adolescents (Suicide, 2015). Reports of suicide have been increasing in the Philippines and have become an alarming issue in the country. In a study conducted by Redaniel, Lebanan-Dalida, & Gunnel (2011), the incidence of suicide had increased in the Philippines for both males and females between 1984 and 2005. Suicide rates went from 0.23 to 3.59 per 100,000 males, and from 0.12 to 1.09 per 100,000 females between 1984 and 2005.

Suicide and suicide behavior are issues that the Philippine government and various organizations are seeking to address, so much so that numerous prevention programs have been established. Senator Miriam Defensor-Santiago introduced Senate Bill No. 1946, the "Student Suicide Prevention Act of 2005", which mandates that school organizations such as the Commission on Higher Education (CHED) and the Technical Education and Skills Development Authority (TESDA) provide proper programs to reduce suicide attempts and completed suicides. Foundations were also created to raise awareness within the Filipino

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society. Created by Jean Goulbourn, the Natasha Goulbourn Foundation is a non-profit organization that promotes awareness and understanding of depression, in the hopes of preventing suicide.

There are different views on suicide and how people should understand it. In the past, suicide has mostly been viewed as a topic of taboo (Pompili, 2010). Viewed as a sin or crime, it was too shameful to discuss openly in most cultures and religions. Since the rise of science and medicine, however, society has become more inclined to view suicide as a result of mental illness. In the 19th century, a milestone was achieved for understanding suicide from a biopsychological point of view: There are forces or causes inside the person that cannot be consciously known or considered, but nevertheless influence suicide risk (Pompili, 2010).

One must keep in mind that suicide and suicide behavior are not one and the same. While suicide is defined as the act of intentionally taking one's own life, suicide behaviors also include nonfatal thoughts and behaviors (Nock et al., 2008). According to Nock et al. (2008), suicide behavior can be classified into three categories: suicide ideation, suicide plan, and suicide attempt. Suicide ideation refers to ideas, thoughts, and contemplation in regard to suicide; suicide plan refers to formulations of how to take one's life; lastly, suicide attempt is defined as engaging with to self-injurious behavior accompanied by intent to actually die (Nock et al., 2008).

The categories under suicide behavior should be seen in a continuum of severity, leading from ideation to the formulation of a plan, then to a suicide attempt. Consistent with this hierarchical model, individuals who experience persistent and severe suicide ideation are at a higher risk of attempting suicide (Scanlan & Purcell, 2009). While not all suicide ideation results in a suicide attempt (Reynolds, 1991), ideation is nevertheless strongly associated with depression, and with depressive feelings and cognitions. As such, sadness, loss, grief, guilt, fatigue, pessimism, poor concentration, anhedonia, and nihilism may be viewed as an immediate cause of suicide attempts, some of which will become completed suicides (Scanlan & Purcell, 2009).

As defined by Pompili (2010), suicidology is the study of suicide and suicide prevention. In suicidology, many interacting factors are associated with suicide but there is no single factor is causally sufficient, thus making suicide a complex concept (Pompili, 2010). Epidemiologists study suicide through associated risk factors, which are used to predict the likelihood of suicide behavior. Past research has identified demographic, psychiatric, psychological, biological, and stressful life events as the strongest major risk factors in predicting suicide behavior (Nock et al., 2008). Other risk factors associated with suicide behaviors include family disturbances, mental health problems, and previous suicide attempts (Scanlan & Purcell, 2009). Such risk factors may be considered "distal causes," in that they influence the development of the specific emotions and cognitions that precipitate suicide behavior, but cannot be considered the direct cause of a suicide attempt. Hopelessness and helplessness, both associated with depression, are considered to be among the strong predictors of suicide behavior (Hewitt, Caelian, Chen, Flett, 2014). These may be considered "proximal causes," in that they saturate the conscious awareness of the desperate person, thereby preceding and producing suicide behavior and suicide attempts. Factors that help decrease a person's probability of attempting suicide are called protective factors. Research studies have found religiosity to be one of the strongest among them. Moral objections and social support also seem to protect people against suicide attempts (Nock et al., 2008).

Interest between the relationship of personality traits and suicide behavior has been increasing for the past few years (Brezo, Paris, & Turcki, 2005). According to Brezo, Paris, & Turecki (2005), personality traits are linked to suicide behavior because traits contribute to a diathesis for suicide behavior. In the diathesis model, pathological behavior is seen as the product of internal characteristics and external events. Internal characteristics constitute a vulnerability that can, in conjunction with precipitating external events, create a window of opportunity for the emergence of pathological behavior. Personality traits reflect a propensity or disposition toward those cognitions, emotions, and behaviors which are consistent with the trait. Since situations are also important, traits do not determine behavior, but instead influence its baseline probability. The connection between personality traits and any actual, concrete behavior is therefore indirect and probabilistic. Personality traits are determined by genes, environment, and the interaction between genes and environment (Brezo, Paris, & Turecki, 2005).

One of the most used models of personality traits in relation to suicide behavior is McCrae and Costa's Five Factor Model of Personality (FFM; 1992). The FFM is a hierarchical model consisting of five broad dimensions, each of which is composed of six narrower trait facets. Among the FFM factors, one pole is considered to be adaptive and the other maladaptive. Emotional Stability, Extraversion (E), Agreeableness (A), Conscientiousness (C), and Openness to Experience (OTE) are the adaptive poles. Neuroticism (N), Introversion, Antagonism,

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Disinhibition, and Rigidity are the maladaptive poles. As such, we would expect that positive associations with suicide behavior would be found for the maladaptive poles. These can also be considered negative associations with the positive pole, depending on how the researcher wishes to phrase the findings. The maladaptive poles may thus be considered risk factors, while the positive poles can be considered protective factors. Since the FFM is believed to be comprehensive, and since personality traits are, by definition, predispositions that influence the baseline probability of behavior, the FFM should relate broadly to many forms of psychopathology.

A literature search revealed a total of nine studies using either the FFM or its lexical antecedent, the Big Five Model. Interest in the relationship between FFM and suicide behavior can be traced back at least to Velting (1999), who studied the relationship between the FFM and suicidal ideation in a convenience sample of 185 undergraduates. As shown in Table 1, Neuroticism is by far the most common factor found to be related to suicide behavior. Because Neuroticism is defined as a propensity to experience negative emotions, its association with suicide behavior would appear to be universal: There is no suicide without the experience of pain. As such, Neuroticism creates an enduring vulnerability to painful emotional states, and therefore, to suicidal ideation and behavior. Moreover, in the NEO-PI-R, which operationalizes the FFM, depressivity is considered a facet trait. The association between depressive states and suicide behavior is well known.

Table 1 Relationships Between FFM or Big Five Factors and Suicide Behavior Identified in the Literature

	N	A	E	C	OTE
Blüml et al. (2013), n = 2555	+ (A)	- (A)	- (A)	- (A)	- (A)
Mousavi et al. (2015), n = 200	+ (B)	- (B)	- (B)	- (B)	- (B)
Kerby (2003), n = 299	+ (C)	- (C)	- (C)	- (C)	
Soltaninejad et al. (2013), n = 1659	+ (D)	- (D)	- (D)		
DeShong et al. (2014), n = 348	+ (E)		- (E)		
Velting (1999), n = 185	+ (F)			- (F)	
Heisel et al. (2005), n = 134	+ (G)				+ (G)
Topić et al. (2012), n = 179	+ (H)	- (H)			
Chioqueta & Stiles (2004), n = 219	+ (I)				

A. Suicidal Behaviors Questionnaire-Revised
B. Suicide attempters
C. Suicide Probability Scale
D. Beck Scale for Suicidal Ideation
E. Hopelessness Depression Symptom Questionnaire-Suicidality Subscale
F. Adult Suicidal Ideation Questionnaire
G. Scale for Suicide Ideation
H. Autodestructiveness Scale, Suicidal Depression subscale
I. Hopkins Symptom Check List

Interestingly, only two of the nine studies found an association between suicide behavior and all five factors. After Neuroticism, associations between other factors and suicide behavior are well documented, but by no means universal. Low Agreeableness (high Antagonism) and low Extraversion (high Introversion) were well documented, but by no means universal, both being found in five studies. Conscientiousness was negatively related to suicide behavior in four studies, whereas Openness was negatively related in two studies and positively related in one study. With this single study on Openness being the only exception, the expected pattern of relationships universally supports the premise of the FFM, whereby negative factor poles relate to psychopathology and that positive factor poles are protective against psychopathology. Because the sample sizes were adequate to generate substantial statistical power, we can conclude that the association between certain factors and suicide ideation is likely to be sample specific, or could be due to measure of suicide behavior used in that particular study. Thus far, no two studies have used the same measure of suicide ideation.

Suicide and suicide behavior in adolescents have become great concerns in Filipino society (Reynolds & Mazza, 1999). According to Shain (2007), suicide is the third leading cause of death among adolescents from

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ages 15-19. Since suicidal behavior is becoming much more frequent in the Philippines, we decided to explore the role of personality traits as predisposing and protecting against suicidal behavior. Our goal is to replicate existing studies that have examined the relationship between broad personality factors and suicide behavior, and then to explore the predictive power of more specific personality traits.

Given the widespread use of the FFM, it is further hoped that its factors and facet traits can be of assistance to guidance counselors and other professionals who routinely conduct personality assessment in school- and college-based settings. Since community-based programs have not generally been supported in influencing suicide rates (Brent & Brown, 2015), school- and college-based programs become the logical point of identification and intervention. In the Saving and Empowering Young Lives in Europe study (Wasserman, Hoven, Wasserman, et. al., 2015), the authors examined three such programs, namely Question, Persuade, and Refer (QPR), the Youth Aware of Mental Health Programme (YAM), and ProfScreen, across 10 European countries, 168 schools, and over 11,000 youth. Only YAM was effective at decreasing suicide attempts and suicidal ideation. Identification of personality variables that mediate suicidal ideation and suicide attempts is an important complement to these efforts, and could influence their effectiveness.

Methods

Research Design

The study used a correlational design to determine which domains of the Five Factor Model (FFM) predict suicide behavior in a sample of Filipino adolescents. The FFM was the independent variable and suicide behavior was the dependent variable. The researchers hypothesized that each of the five traits would significantly correlate with suicide behavior, with Neuroticism being the most significant predictor of suicide probability.

Participants

The participants were 604 Filipino adolescents from various universities and colleges in the Metro Manila area. The sample was 73% female (n = 439) and 27% male (n = 161). Ages ranged from 17-21 (M = 18.53, SD = 1.05). The students belonged to various disciplines, including Psychology (75.33%), Early Childhood Education (4.30%), Accountancy (3.97%), Information Technology (2.98%), Hotel and Restaurant Institution Management (3.31%), Nutrition (2.48%), Tourism (1.66%), Interior Design (1.66%), Business Administration (1.16%), Fine Arts and Architecture (1.16%), Communication Arts (0.99%), Export Management (0.50%), and Multimedia Arts (0.50%)

Procedure

With the use of non-probability convenience sampling the researchers sent letters to various universities and colleges within Metro Manila. An IRB /HSRB approval was not required prior to conducting the survey, which consisted of only questionnaires. As such, once the requests had been approved by the institutions, an informed consent was obtained from each of the participants. The battery of tests that included the Suicide Probability Scale (SPS) and NEO Personality Inventory Revised (NEO PI-R) was then administered to participants in their respective classrooms. The testing time for the pencil & paper based administration was completed within 45 minutes to an hour. Respondents were informed that they would be receiving extra credits for voluntarily participating in the research study.

Measures

Neuroticism Extraversion Openness Personality Inventory Revised. The Neuroticism Extraversion Openness Personality Inventory Revised (NEO PI-R) is a 240-item self-administered instrument developed by Paul Costa Jr. and Robert McCrae (Costa & McCrae, 1992) which gives a concise measure of five major domains of personality, namely: Neuroticism (N), Extraversion (E), Openness to experience (O), Agreeableness (A), and Conscientiousness (C). Each domain is comprised of 6 facet scales which constitute personality traits. Together, the 5 domains and the 30 facet scales give a comprehensive assessment of personality. Internal consistency coefficients range from .86 to .93 for factor scores and .56 to .87 for facet scores (Johnsson, 2009). In this study, the Cronbach alpha reliability coefficient of the factors ranged from .83 to .91, specifically .89 for Neuroticism, .88 for Extraversion, .83 for Openness to Experience, .84 for Agreeableness, and .91 for Conscientiousness. Moreover, internal consistency coefficients for the facet scores range from .39 to .79.

Suicide Probability Scale. The Suicide Probability Scale (SPS) is a 36-item self-report measure that assesses suicide risk in adults and adolescents. SPS items use a four-point Likert-type scale ranging from “none or a little of the time” to “most or all of the time.” The SPS includes four subscales, namely Hopelessness (e.g., “I think I have too much responsibility”), Suicide Ideation (e.g., “I think of things too bad to share with others”), Evaluation (e.g. “I feel many people care for me deeply”), and Hostility (“When I get mad, I throw things”). Individuals are asked to rate the frequency of their

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subjective experiences and past behavior. The subscales evolved from various theories proposed to explain and predict suicide. The internal consistency of the subscales ranges from 0.62 to 0.98. Validity of the instrument is considered to be good (Eltz et al., 2006). Cronbach's alpha reliability in the present study for the total SPS score was.89.

Data Analysis

Data analysis proceeded from more general to more specific. First, factor scores on the NEO-PI-R were correlated with total scores on the Suicide Probability Test (SPS), in order to test for significant relationships at the most abstract or broadband level supported by these instruments. Second, the NEO-PI-R factor scores were used in a forward stepwise multiple regression in order to predict total SPS scores. Forward regression was used because it generally results in a parsimonious model. Third, facets from each factor of the FFM were entered into a forward stepwise regression in order to predict SPS total score. As expected, Depressivity emerged as the most significant predictor, thereby validating mood as the most important proximal variable predicting suicide behavior (as a personality trait, depressivity suggests a disposition to recurrent depressive states). Accordingly, forward stepwise regression was again used to predict SPS total scores, with depressivity excluded from the analysis. The purpose here was to determine which personality traits might create the hopeless and helpless mood states that eventuate in suicidal behavior. These are captured by depressivity, but precede depressivity as internal characteristics predisposing the individual toward suicide behavior.

Results

The sample of Filipino adolescents consisted of 73% female (n = 439) and 27% male (n = 161) with ages ranging from 17-21 (M = 18.53, SD = 1.05). The students belonged to various disciplines, including Psychology (75.33%), Early Childhood Education (4.30%), Accountancy (3.97%), Information Technology (2.98%), Hotel and Restaurant Institution Management (3.31%), Nutrition (2.48%), Tourism (1.66%), Interior Design (1.66%), Business Administration (1.16%), Fine Arts and Architecture (1.16%), Communication Arts (0.99%), Export Management (0.50%), and Multimedia Arts (0.50%)

As shown in Table 2, Neuroticism was mostly strongly correlated with SPS total score at .41. According to Cohen (1992), Pearson correlations greater than .30 are considered to be moderately-sized effects. Extraversion, Agreeableness, and Conscientiousness were also negatively correlated with SPS total score at -.18, -.19, -.16, respectively. These are considered to be small effects in Cohen's framework. As such, high Neuroticism should be considered a moderate risk factor for suicidal behavior, while Extraversion, Agreeableness, and Conscientiousness can be considered to be weak protective factors.

Table 2 Pearson-R Correlation Between Personality Traits and Suicide Behaviour

	M	SD	N	E	O	A	C	SPS
N	106.63	20.72	1					
E	111.93	20.37	-.22	1				
O	118.20	16.71	.08	.22	1			
A	110.67	17.13	-.11	.16	.00	1		
C	110.61	21.38	-.34	.14	-.04	.11	1	
SPS	64.87	17.21	.41*	-.18*	.01	-.19*	-.16*	1

Note. N = 604* p< .01

Table 3 Stepwise Regression Analysis of the Five Factor Model Domains

Variable	Model 1 N			Model 2 N + A			Model 3 N + A + E		
Suicide Behavior	R^2	SE	F	R^2	SE	F	R^2	SE	F
	.17	15.71	121.53	.19	15.53	69.88	.19	.19	48.11

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Based on preceding correlation matrix, Neuroticism, Extraversion, Agreeableness, and Conscientiousness were subjected to a forward stepwise regression. As shown in Table 3, Agreeableness and Extraversion significantly improved the predictive power of the model over Neuroticism alone, but the increment in R^2 from .17 to .19 was small. The .02 increase in R^2 was significant due to the large sample size, which creates enough statistical power to find small effects significant.

Next, the 30 facets of the NEO-PI-R were subjected to a forward regression in order to predict suicide behavior. As shown in Table 4, results indicate that the facets of the FFM that are high predictors of suicide behavior, as measured by the SPS, are high Depressivity (N3), low Trust (A1), and low Straightforwardness (A2). Consistent with previous findings that hopelessness and helplessness may be viewed as proximal causes of suicidal behavior (Hewitt, Caelian, Chen, Flett, 2014), Depressivity was by far the strongest predictor, as expected. At R2 = .21, the predictive power of Depressivity exceeded that of Neuroticism, Agreeableness, and Extraversion combined.

Table 4 Stepwise Regression Analysis of the Five Factor Model (FFM) Facets

Variable	Model 1 N3			Model 2 N3 + A1			Model 3 N3 + A1 + A2		
Suicide Behavior	R^2	SE	F	R^2	SE	F	R^2	SE	F
	.21	15.27	164.14	.26	14.85	104.49	.26	14.81	71.51

Table 5 Stepwise Regression Analysis of the Five Factor Model Facets – Excluding N3

Variable	Model 1 N6			Model 2 N6 + A1		
Suicide Behavior	R^2	SE	F	R^2	SE	F
	.09	16.42	60.73	.16	15.81	56.78
	Model 3 N6 + A1 + E2			Model 4 N6 + A1 + E2 + N2		
	R^2	SE	F	R^2	SE	F
	.17	15.73	40.64	.18	15.67	32.09

Table 6 Profile of the Participants in the Study with Reference to the Four Suicide Probability Scale (SPS) Categories

	Subclinical	Mild	Moderate	Severe
Male (n = 161)	156 (25.83%)	4 (0.66%)	0 (0.00%)	1 (0.17%)
Female (n = 443)	427 (70.70%)	13 (2.15%)	2 (0.33%)	1 (0.17%)
Total N = 604	583 (96.52%)	17 (2.81%)	2 (0.33%)	2 (0.33%)

Table 7 Frequency of the Participants in each of the Suicide Probability Scale (SPS) Categories Who Possess the NAI Model

	Subclinical	Mild	Moderate	Severe
Male	5 (3.20%) out of 156	0 (0.00%) out of 4	0 (0.00%)	1 (100%) out of 1
Female	25 (5.85%) out of 427	1 (7.69%) out of 13	0 (0.00%) out of 2	0 (0.00%) out of 1
Total	30 (5.15%) our of 583	1 (5.88%) out of 17	0 (0.00%) out of 2	1 (50%) out of 2

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Because this outcome was expected, forward stepwise regression on the FFM facets was conducted without Depressivity (N3) in order to allow more distally-related facets of personality to emerge as predictors. These results, shown in Table 5, suggest that Vulnerability (N6), Trust (A1), Gregariousness (E2), Angry Hostility (N2) should also be viewed as important in understanding the genesis of suicidal behavior.

As shown in Table 6, of the 604 participants in the study, the vast majority (96.52%) fell into the subclinical (normal) category. Another 2.81% of the participants were considered to be in the mild risk category, two participants (0.33%) were considered moderate, and 2 participants (0.33%) were considered severe.

Discussion

In the current study, Neuroticism emerged as the strongest predictor of suicide behavior among the five factors. High Neuroticism is associated with a tendency to be quickly and easily aroused by external stressors, along with a slowness to return to baseline (Costa & McCrae, 1992). Neuroticism is associated with feelings of envy, anxiety, loneliness, and guilt, as well as a tendency to magnify problems and cope with them poorly. These results are consistent with Ormel et al. (2013), who argued that Neuroticism is one of the strongest predictors of common mental disorders. Likewise, Shirazi, Khan, and Ansari (2012) found that Neuroticism is a strong predictor of mental health among college students. Huang, Hu, Han, Lu, and Liu (2014) indicate that the presence of a mental disorder is a major risk factor for suicide and suicide behavior, a mental disorder being in 90% of such cases. Bowen, Baetz, Leuschen, and Kalynchuk (2011) showed that Neuroticism is a predictor of depression, which is likely to accompany suicidal ideation. Finally, Duberstein et al. (2000) and DeShong, Tucker, O'Keefee, Mullins-Sweatt, and Wingate (2014) found that those who have suicide ideation have higher levels of Neuroticism.

High Antagonism was also found to predict suicide behavior. Antagonists are predominantly suspicious, unfriendly, and hostile. In addition to lacking the capacity to feel genuine concern for the well-being of others, they may find it difficult to function socially as a result of their automatic pessimism and distrust of the intentions of others. Stemming from their Antagonistic nature, they may often choose to compete than to cooperate. This may eventually lead to social isolation and possibly increase the risk for suicidal ideation. These findings converge with Kerby (2003), Topić, Kovačević, & Mlačić (2012), and Soltaninejad et al. (2013), all of which found that high Antagonism increases suicide ideation.

Our findings also indicate that Introversion is a significant predictor of suicide behavior. Individuals who are introverted may be described as quiet, passive, and unsociable. Because they are not extroverted, they keep to themselves, which deprives them of social interaction and support needed to preempt suicide behavior. The combination of Neuroticism and Introversion suggests a socially isolated and brooding pessimist, someone who chronically worries and feels vulnerable, leading to the hopelessness and helplessness which accompanies suicidal behavior. These hypotheses are supported by Chioqueta and Stiles (2004), Tucker et al. (2014), and Janowsky (2001), all of whom found Introversion to be significantly correlated with depression. The lack of social support results to the use of irrational, socially-avoidant problem-solving strategies (Duberstein et. al., 2000). Introverted individuals are more likely to undergo crises solely on their own. They are less likely to seek help from others, and given that introversion is positively correlated with hopelessness, introverts assume that social support will not be helpful during a crisis (Duberstein et. al., 2000). Similarly, Ferrer & Kirchner (2015) discussed higher levels of Extraversion serve as protective factors against suicidal tendencies among adolescents with adjustment disorders.

In sum, suicide behavior in Filipino adolescents may be described at the most abstract level as a combination of three personality trait domains, namely Neuroticism, Antagonism, and Introversion, a "Neuroticism Antagonism Introversion model." This largely replicates the findings summarized in Table 1, which show associations with these same factors to be most replicated. Nevertheless, we would also remark on the theoretical importance of Conscientiousness. Since Conscientiousness provides a brake on impulsivity and disinhibition, high Conscientiousness could prevent the progression through the hierarchy of suicide behaviors from suicide plan to suicide attempt. Since the current study was based on normal subjects, few of whom had suicide behaviors, the inhibitory effects of high Conscientiousness may not have been discoverable in the current sample. Although Conscientiousness was associated with total SPS score, it did not uniquely predict enough of the variance in total the SPS score to enter into a forward regression with the other FFM factors. Among the 604 participants, only 32 possessed all three predictors of suicide behavior, namely high Neuroticism, high Antagonism, and high Introversion (see Table 7).

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Only two participants were assessed by SPS total score as being at the level of severe suicide risk. These findings converge with those of previously mentioned studies predicting suicidal ideation from the FFM (Velting, 1999; Chioqueta & Stiles, 2004; Soltaninejad et al., 2013; DeShong, Tucker, O'Keefee, Mullins-Sweatt, & Wingate, 2014), thereby supporting the cross-cultural generality of these associations.

In addition to the factors of the FFM, the current study also used a multiple regression to explore which facets might most strongly predict suicide behavior. As expected, Depressivity was found to be the strongest predictor. As a personality trait and facet of Neuroticism, depressivity is simply the tendency to experience depressive states. Scanlan & Purcell (2009), for example, found that suicide ideation is often related to depression, and depressive feelings and cognitions such as sadness, loss, grief, guilt, fatigue, pessimism, poor concentration, anhedonia, and nihilism. Beyond this obvious association, stepwise forward regression found that vulnerability (N6), low trust (A1), low gregariousness (E2), and high angry hostility (N2) form a parsimonious model that predicts suicide behavior. With an R^2 = .18, the predictive power of this model compares favorably to that of the NAI model, which was R^2 = .19 in the current study.

As such, these findings argue that it is important to go beyond the generality of the NAI model when understanding the vulnerability to suicide behavior created by personality traits. In particular, our results suggest that very little predictive power is lost in advancing hypotheses that are considerably more specific than those advanced by the NAI model alone. Consulting the construct definitions for these traits as given in the NEO-PI-R manual creates an image of someone who is chronically susceptible to and copes poorly with stress (high vulnerability), and who is too mistrustful and angry with others to seek out social support and other external resources (high mistrust, low gregariousness, and high angry hostility). Such a person may enter a vicious cycle that amplifies vulnerability by magnifying insignificant issues, becoming skeptical of the intentions of others toward him or her, and then acting angrily and cynically towards them. He or she is predisposed to anger, or to become angered by the intolerable situations that must be endured. Finding the intentions of others to be insincere and questionable, there is a preference to alone, rather than to be in the company of others. The preference for being alone (low gregariousness), along with suspiciousness (low trust) and anger at others (high angry hostility), insulate the individual from external influence that might short-circuit the vicious cycle that amplifies their hopelessness and helplessness (high depressivity), thereby leading to the formation of a suicidal plan. If high Disinhibition (low Conscientiousness) is also present, then there is nothing to inhibit the progression from suicidal thoughts and feelings to a suicide attempt, and perhaps a completed suicide (low Conscientiousness entails high impulsivity).

Although the picture created by the NEO facet traits appears clean and coherent, it must nevertheless be admitted that in terms of effect size, the amount of variance explained by the regression models was small. This indicates that internal factors alone cannot explain suicide behavior. The current situation also plays a major role in how the individual responds (Cherry, 2015).

Conclusion

Personality traits predispose individuals toward a collection of behaviors which are consistent with those traits. As such, personality traits may be regarded as internal risk factors for various pathological outcomes, suicide behavior being one such example. In the study, the major personality traits that had the strongest relationship with suicide were Neuroticism, Antagonism, and Introversion, all of which are considered pathological poles of the FFM. Since personality factors and personality traits are reliable indicators of suicidal ideation, it is important that guidance counselors and other professionals be made aware the role these traits play in increasing suicide behavior. Screening for these traits could improve the effectiveness of school- and college-based programs.

Limitations of the current study include the age of the respondents, who were 17- to 21-year-old college students in Metro Manila universities only. As such, the study was unable to explore contributions to suicide behavior that might accompany life challenges experienced by older subjects, for example, situational vulnerability to suicide produced by the onset of major health challenges. Additionally, the study included only traits from the FFM. Other comprehensive factor models of personality, such as the Hexaco (Lee & Ashton, 2004) are composed of other traits that may also figure prominently in the development of mood states and vicious cycles that eventuate in suicide behavior. Finally, the sample consisted largely of normal adolescent students, rather than, for example, students referred for psychological counseling. This limited the range of the variables involved, which could have prevented additional traits from emerging as

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significant predictors of suicide behavior in a multiple regression. Nevertheless, the findings do support the cross-cultural generality of the NAI model, and the specific traits identified as predicting suicide behavior suggest important themes that counselors should explore with students judged to be at risk for suicide behavior.

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