Identifying the Predictors of Suicide Ideation, Suicide Planning, and Suicide Attempts among High School Students in the Philippines from four nationally representative datasets

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Abstract - *Using four datasets obtained from the World Health Organization's Global School-based Student Health Surveys (GSHS) for the Philippines (2003, 2007, 2011, 2015) that involved high school students from private and public educational institutions in the country, the study aimed to discover the significant risk and protective factors of suicide ideation, suicide planning, and suicide attempts among the population under study. Results of the study identified several significant predictors of suicide risk from the four timeframes with two factors emerging as the most salient: (1) lack of sleep and (2) number of close friends emerging as the most salient push and pull factors of suicide respectively. This finding highlights the need for greater integration with one's peer groups during a person's life in secondary education and brings to fore the necessity to rethink the amount of activities that high school students engage in at the expense of their sleeping hours. The implications of the results of the study, particularly of the two most salient predictors of suicide, are discussed in the paper.*

Keywords: Suicide, Suicide Ideation, Suicide Planning, Suicide Attempt, Filipino Youth

INTRODUCTION

Suicide is increasingly becoming a social problem in the Philippines, especially among the youth cohort. It is reported to be 9th leading cause of death among those aged 20-24, and responsible for approximately one out of every three deaths among Filipinos aged 10-24 since 2003[1]. Furthermore, it has been reported that an average of seven Filipinos attempt suicide every day [2]. This emerging threat to the nation in general, and the youth in particular, as well as the threat of other mental illnesses that has started to gradually pervade the collective awareness of Filipinos has spurred the country's leadership to enact Republic Act 11036 or the "Mental Health Act"[3]. As a statutory law, R.A. 11036 aims to increase mental health awareness and make mental health services more accessible to the public. It is a law that caters to mental health in general. Meanwhile, more suicide-focused pieces of legislation such as Senate Bill No. 1163: Youth Suicide Prevention Act[4] and House Bill 7858: An Act to Provide Youth Suicide Prevention and Intervention [5], are still pending in the upper and lower houses of the Philippine Congress – their fates unknown and dependent on the discretion of the country's legislators.

The pendency of these "suicide legislations" suggests that the country is starting to show an intent to take preventive measures against suicide. This provides an opportune time to craft an evidence-based policy on suicide prevention. The challenge, however, is on how to make an evidence-based suicide prevention policy when there is very limited Suicidological literature that is based in the Philippine context. Thus far, there have only been around a dozen published research papers on suicide in the Philippines (for a discussion of the extant literature on Filipino suicide, see "Suicidology in the Philippines" in Quintos' paper [6]).Thus far, Suicidology in the Philippines has focused on suicide among Filipino young adults. Meanwhile, other age cohorts, such as adolescents, the middle-aged, and the elderly have yet to be accounted for.This dearth of related literature to base policy decisions on requires more contributions from various medical, behavioral, and social science disciplines that study the phenomenon as it affects Filipinos. This paper is one such contribution.

OBJECTIVES OF THE STUDY

Using secondary data obtained from a randomly selected total sample of 27,046 High School students

from all over the country during 2003 (n=7338), 2007 (n=5657), 2011 (n=5290), and 2015 (8761), this paper looked into the phenomenon of suicide as it affects adolescents in the Philippines by answering the following research questions: (1) What factors are significant predictors of suicide ideation, suicide planning, and suicide attempt among Filipino High School students during 2003, 2007, 2011, and 2015; and (2) Which of the factors are consistent significant predictors of suicide ideation, suicide planning, suicide attempts, and suicide risk as a whole over time?

THEORETICAL FRAMEWORK

This study's guiding framework is inspired by the synthetic theoretical framework presented by Quintos [7] which combined the ideas of Robert Agnew's General Strain theory[8] and Travis Hirschi's Social Bonds theory[9]. From Agnew's General Strain Theory, Quintos utilized the concept of "strains" as factors that may push the person to greater probabilities of suicide. These strains include (1) failure to achieve positively-valued goods, (2) removal of positively-valued stimuli, and (3) confrontation with negative stimuli.In addition to the types of strain identified in Agnew's theory, negative internal state is also included as part of the factors that increase the chances of suicide. Meanwhile, from Hirschi's Social Bonds Theory, Quintos utilized the concept of "Social Bonds" as factors that may pull the person from suicide risk. These four are (1) attachment to significant others, (2) commitment to traditional types of action and goals, (3) involvement in traditional activities, and (4) belief in the normative values of society. The idea of the synthetic theoretical framework is that the strains and the social bonds have a push-pull dynamic with suicide risk, with the strains serving as push factors to suicide and the social bonds serving as pull factors from suicide.

METHODS AND MATERIALS
Materials

Datasets obtained from the Global School-based Student Health Survey (GSHS) were utilized for secondary analysis in this study. Four GSHS have been launched in the Philippines in four timeframes with an interval of four years in-between each: 2003, 2007, 2011, and 2015. The 2003 GSHS had 7338 respondents, the 2007 had 5657 respondents, the 2011 GSHS had 5290 respondents, and the 2015 GSHS had 8761 respondents - for a sum total of 27,046 respondents. All respondents were students of private or public high schools in the Philippines when the data were gathered.

Three variables served as the foci of the study: Suicide Ideation, Suicide Planning, and Suicide Attempt. Each had one question included in the GSHS questionnaire, although the question on Suicide Attempt was only included in the 2011 and 2015 surveys.

A total of 14 variables which fit under the theoretical framework of the study as independent variables to suicide ideation, planning, and attempt were tested for their statistical significance. Among the strains, the following variables were used: (1) Going hungry, (2) Experience of being in a fight, (3) Experience of being injured, (4) Experience of being bullied, (5) Feeling lonely, and (6) Lack of sleep. Among the social bonds, the following variables were considered: (1) Number of close friends, (2) Perception that classmates are helpful in school, (3) Having parents who check their homework, (4) Having parents who understand their troubles, (5) Having parents who know what they do, (6) Engagement in Physical Activities, (7), Engagement in Indoor, non-physically strenuous activities, and (8) Experience of missing school without permission.

Data Analysis

Regression analysis was used as the statistical tool for the study. Variables which were found to be significant at the 0.05 level were identified. Several cross-comparisons of the data were conducted to compare for similarities and differences. First, the significant predictors for each of the four datasets were obtained for suicide ideation, suicide planning, and suicide attempts. These are divided into the push factors – or those that increase the odds of the suicide variables – and pull factors – or those that decrease the odds of the suicide variables. Second, the consistent significant predictors (operationalized here as one flagged significant at the 0.05 level in all four datasets) of suicide ideation, suicide planning, and suicide attempt were identified.Third, suicide ideation, suicide planning, and suicide attempt was combined into "Suicide Risk" and the consistent significant predictors of Suicide Risk (operationalized here as one flagged significantly related at the 0.05 level with suicide ideation, suicide planning, and suicide attempt) in each and among all datasets were identified. For the fourth and fifth analysis, the notable and most important predictors of suicide were

identified. Notable Push and Pull Factors are the variables which were found to be consistent predictors of all three suicide variables for at least one of the four timeframes. The Most Important Predictors of Suicide, on the other hand, pertain to the variables that were found to be consistent predictors of all three suicide variables for all four timeframes.

RESULTS AND DISCUSSION

Tables 1, 2, and 3 presents the odds ratios of the predictors and identifies with predictors are significant for the target population of the study. Tables 4 and 5, on the other hand, summarize the significant predictors for cross-comparison between and among the 4 timeframes.

A prima facie observation of the regression results of Tables 1, 2 and 3 shows that not all the variables considered as strains or social bonds proved to be significant predictors for the high school Filipino population. Furthermore, not all variables that proved significant as predictors of suicide ideation, suicide planning, and suicide attempts were consistently statistically significant for all four timeframes, though during the timeframes that they are, the respective directions of their effect on the suicide dependent variables are consistent.

Suicide Ideation

When it comes to suicide ideation (see Table 1), 7 variables proved significant during the 2003 timeframe. Four of these are push factors (Experience of being injured, Experience of being bullied, Feeling lonely, and Lack of sleep) and the remaining three are pull factors (Number of close friends, Having parents who understand their troubles, and Having parents who know what they do). This means that the significant factors concern the youth's mental state (Feeling lonely), their social environment and its pressures (Lack of sleep), interpersonal relationship with peers (Experience of being injured, Experience of being bullied, and Number of close friends) and parental relationship with one variable (Having parents who understand their troubles) serving as an indicator of integration, and another variable (Having parents who know what they do) serving as an indicator of regulation.

The 2007 timeframe saw this set of significant predictors increase to 9 variables, wherein 3 new pull factors (Experience of being hungry, Perception that classmates are helpful in school, and Having parents who check their homework) were included in the set alongside the exclusion of 1 pull factor (Having parents who know what they do). Meanwhile, no changes occurred among the push factors. It is interesting to note that the changes in the pull factors pertain to an inclusion of another indicator of integration – this time, with one's peers (Perception that classmates are helpful in school) - and a replacement of one indicator of Parental regulation (Having parents who know what they do) with another indicator of Parental regulation (Having parents who check their homework).

Table 1. Odds Ratios between Suicide Ideation and the Social Bonds and Social Strains, 2003-2015.

	SUICIDE IDEATION			
PREDICTORS	**GSHS 2003**	**GSHS 2007**	**GSHS 2011**	**GSHS 2015**
• *Experience of being hungry*	1.091	.897*	.847*	.830*
• *Experience of being in a fight*	1.040	1.040	1.077	1.068*
• *Experience of being injured*	1.276*	1.103*	.994	1.072*
• *Experience of being bullied*	1.154*	1.114*	1.094*	1.137*
• *Feeling lonely*	1.126*	1.266*	1.263*	1.214*
• *Lack of sleep*	1.238*	1.238*	1.274*	1.260*
• *Number of close friends*	.539*	.635*	.645*	.606*
• *Perception that classmates are helpful in school*	.930	.885*	.800*	.897*
• *Having parents who check their homework*	1.001	.808*	.903*	.853*
• *Having parents who understand their troubles*	.880*	.817*	.844*	.779*
• *Having parents who know what they do*	.896*	.969	.921*	.905*
• *Engagement in Physical Activities*	.954	.972	.959	1.034
• *Engagement in Indoor, non-physically strenuous activities*	.954	1.044	1.129*	1.021
• *Experience of missing school without permission*	1.032	1.095	1.186*	.964

* significant at the 0.05 level

Of greater surprise and wonder is the inclusion of what was expected to be a potential push factor (Experience of being hungry) in the set of significant pull factors during the 2007 timeframe. Previous studies on suicide[10]-[20] have reported a significant relationship between hunger and mental health issues including suicide, wherein hunger or food insecurity has been found to have a detrimental effect on mental health and could lead to higher risks of suicide. Yet, in this study, the opposite was the case. It is unsure why. Could it be that deprivation of material resources like food produce youths sturdier against suicide – possibly because, in such cases, a difficult life is the norm rather than the exception? Does this mean that deprivation of material resources is less of a risk factor for suicide unlike deprivation of social relationships? It is beyond the scope of this study to ascertain, and future studies would do well to explore this surprising relationship.

The 2011 timeframe saw a further increase in the set of significant predictors of suicide ideation. From 7 in 2003 to 10 in 2007, the 2011 timeframe's set comprised on 11 factors. Among these 11 factors were six pull factors and five push factors. The significant pull factors changed little from the subset from 2007, with the only change being the return to significance of the other indicator of Parental regulation that was significant back in 2003 but was not in 2007: Having parents who know what they do. When it comes to the push factors, on the other hand, Experience of being injured is no longer significant in predicting suicide ideation. Instead, what became significant are the Experience of missing school without permission (which is indicative of both lack of regulation and weakened involvement in traditional societal activities) and the Engagement in Indoor, non-physically strenuous activities. While the inclusion of the former is within the expectations of this study, the inclusion of the latter as a push factor is a noteworthy surprise. This variable, Engagement in Indoor, non-physically strenuous activities, was included as an indicator of the social bond of involvement in this study, albeit it is an indicator less used than the usual indicator of physical activities as a form of social bond [21]-[23], possibly because of its negative impact on depression [24] and because mere involvement means that these physically active youth would have spent their free energy and time on other matters aside from suicide. What appeared as the case in this study is that a factor related to it, engagement in indoor, non-physically strenuous activities, - which theoretically would have spent the same free time and energy of the youth similar to physical activities - is a predisposing factor to suicide ideation, rather than a protective factor. A possible explanation is that while the indoor activities are one way to spend time, it lacks the social element of traditional physical activities or sports which give these activities a positive impact on social relationships, self-esteem, and life satisfaction in general [25]-[28]. Most indoor, non-physically strenuous activities are done individually rather than as group activities. Examples of these are reading books, watching television, surfing the World Wide Web, and playing computer and/or console games (e.g. Playstation, Xbox) Hence, it does not lend the same benefit against suicide as that achieved by outdoor physical activities.

Finally, the 2015 timeframe retained the number of significant predictors of suicide ideation to 11. However, there were notable changes in the set of predictors' composition: the two new additions to the push factors in 2011 - Experience of missing school without permission and Engagement in Indoor, non-physically strenuous activities – have lost their statistical significance. These two factors were replaced in the 2015 timeframe by the return to significance of Experience of being injured, and the inclusion of Experience of being in a fight, a strain factor possibly indicative also of weakened social integration. Meanwhile, the set of pull factors against suicide in 2011 were retained in 2015.

Suicide Planning

In terms of suicide planning (see Table 2), the regression results for the 2003 timeframe flagged 7 variables as significant. Out of these 7 variables, 4 functioned as push factors while the remaining 3 functioned as pull factors against suicide planning. The push factors for suicide planning in 2003 are predominantly similar to the push factors for suicide ideation during the same timeframe, the only difference being that while suicide ideation had Feeling lonely as a significant variable, this was replaced in the set of push factors for suicide planning with Experience of being in a fight. When it comes to pull factors, on the other hand, the significant factors for suicide planning has shifted from peers and family relationship to just a focus on peers and activities. To be specific, the parental variables indicative of regulation and integration which were significant predictors of suicide ideation in 2003 were inadequate predictors of suicide planning during the same timeframe. Instead, the two variables related to peer groups (Number of close friends and Perception that

classmates are helpful in school) were the only significant pull factors aside from Engagement in Indoor, non-physically strenuous activities – which followed the expected direction of influence on suicide as hypothesized by the study's theoretical framework.

Moving to the 2007 timeframe, the set of significant predictors of suicide planning has drastically decreased to just 3 variables – inclusive of 1 push factor in the form of lack of sleep, and 2 pull factors in the forms of parental integration (having parents who understand their troubles) and peer integration (number of close friends). It is worth noting that out of these three variables, only the parental integration variable was not included in the set of predictors back in the 2003 timeframe.

As the analysis moves to the 2011 timeframe, the set of significant predictors for suicide planning once again ballooned to 8 variables inclusive of equal parts of 4 push and 4 pull factors. Among the push factors are (1) Experience of being in a fight, (2) Experience of being bullied, (3) Lack of sleep, and, once again in deviation of the direction hypothesized by the theoretical framework, (4) Engagement in Indoor, non-physically strenuous activities. Meanwhile, the pull factors are comprised of the equally surprising finding of (1) Experience of being hungry, (2) Number of close friends, (3) Perception that

classmates are helpful in school, and (4) Having parents who understand their troubles.

By the 2015 timeframe, the set of significant predictors for suicide planning has further increased to 11 variables, 6 of which are pull factors and the remaining 5 serving as push factors. Among the pull factors, the 2015 set retained those which are included in the 2011 set, with the addition of two parental regulation variables – Having parents who check their homework and Having parents who know what they do. Meanwhile, the push factors for 2015 added Feeling lonely and, surprisingly, Engagement in Physical Activities, in the set of push factors back in 2011 at the expense of the variable of Experience of being in a fight. The inclusion of Engagement in physical activities among the push factors, in contrast to what was hypothesized by the study's theoretical framework, is unexpected but not completely unsupported by related literature on Suicidology [29].

Suicide Attempts

A quick browse of the results in Table 3 shows that both the 2011 and 2015 timeframes featured a set of 10 statistically significant predictors. However, the compositions of the two sets have differences. For one, the 2011 timeframe featured 5 significant push factors and 5 pull factors. The 2015 timeframe, on the other hand, featured 6 push factors and only 4 pull factors.

Table 2. Odds ratios between Suicide Planning and the Social Bonds and Social Strains, 2003-2015.

PREDICTORS	SUICIDE PLANNING			
	GSHS 2003	GSHS 2007	GSHS 2011	GSHS 2015
• *Experience of being hungry*	1.073	.985	.846*	.892*
• *Experience of being in a fight*	1.112*	1.099	1.177*	1.041
• *Experience of being injured*	1.191*	1.102	.975	1.016
• *Experience of being bullied*	1.171*	1.052	1.106*	1.141*
• *Feeling lonely*	1.070	1.078	1.064	1.122*
• *Lack of sleep*	1.301*	1.155*	1.223*	1.242*
• *Number of close friends*	.532*	.563*	.571*	.567*
• *Perception that classmates are helpful in school*	.873*	.940	.851*	.873*
• *Having parents who check their homework*	.925	.903	.960	.858*
• *Having parents who understand their troubles*	.950	.769*	.829*	.824*
• *Having parents who know what they do*	.973	.930	.935	.897*
• *Engagement in Physical Activities*	.964	1.004	1.022	1.067*
• *Engagement in Indoor, non-physically strenuous activities*	.893*	1.026	1.138*	1.075*
• *Experience of missing school without permission*	1.023	.958	1.089	1.043

* significant at the 0.05 level

Table 3. Odds Ratios between Suicide Attempt and the Social Bonds and Social Strains, 2011-2015.

	SUICIDE ATTEMPT	
PREDICTORS	**GSHS 2011**	**GSHS 2015**
• *Experience of being hungry*	.907*	.944
• *Experience of being in a fight*	1.128*	1.091*
• *Experience of being injured*	1.095*	1.115*
• *Experience of being bullied*	1.152*	1.154*
• *Feeling lonely*	1.083	1.156*
• *Lack of sleep*	1.188*	1.307*
• *Number of close friends*	.538*	.558*
• *Perception that classmates are helpful in school*	.863*	.805*
• *Having parents who check their homework*	1.027	.938
• *Having parents who understand their troubles*	.824*	.824*
• *Having parents who know what they do*	.909*	.908*
• *Engagement in Physical Activities*	1.000	1.017
• *Engagement in Indoor, non-physically strenuous activities*	1.019	1.009
• *Experience of missing school without permission*	1.234*	1.141*

* significant at the 0.05 level

In the 2011 timeframe, the push factors are (1) Experience of being in a fight, (2) Experience of being injured, (3) Experience of being bullied, (4) Lack of sleep, and (5) Experience of missing school without permission. All five push factors were within the expectations of the study's theoretical framework. Meanwhile, the pull factors are (1) Experience of being hungry, (2) Number of close friends, (3) Perception that classmates are helpful in school, (4) Having parents who understand their troubles, and (5) Having parents who know what they do. Just like in the previous instances in Suicide ideation and Suicide planning, only the inclusion of Experience of being hungry as a pull factor deviated from the hypothesized relationships of the study's theoretical framework.

Moving to the 2015 timeframe, the set of push factors for suicide attempts remained the same, albeit with the inclusion of Feeling lonely as a significant variable. In terms of the 2015 pull factors, the same set of variables from the 2011 timeframe was retained, only with the exclusion of Experience of being hungry among the significant variables.

Synthesis of Predictors

What has been observable in the discussions of Tables 1, 2, and 3 for Suicide ideation, Suicide planning, and Suicide attempts is that the variables which proved to be statistically significant predictors of the three suicide variables vary across timeframes in terms of both number and composition. Despite these variations, however, certain consistencies can be found. Table 4 summarizes the consistent push and pull predictors of the respective suicide variables across the timeframes featured in the study.

It can be observed from Table 4 that the three suicide variables differ in their respective number of significant predictors. Suicide ideation features 3 push factors with 2 pull factors. Suicide planning features one push and one pull factor. Suicide attempt has the most number of significant predictors, featuring 4 push factors and 4 pull factors.

It is observable that at the suicide ideation and suicide planning stages, the push and pull factors are indicative either of poor or aversive conditions that result to a lack of sleep, or weak or strong social integration (Experience of being bullied vs. Number of close friends). The only exemption to this is the mental state of loneliness, which, in itself, could simply be a result of weak social integration. After all, loneliness pertains to the feeling of dejectedness from a lack of companionship. A more interesting observation can be made with regard to suicide attempts. It is clear that the elements of poor or aversive conditions resulting to lack of sleep and social integration are still present as significant predictors, but the new additions are Experience of being in a fight, Experience of being injured, Experience of missing school without permission, and Having parents who know what they do.

These are noteworthy because a scenario of an opportunity for suicide attempt would need these elements, especially if some of the ideas of the Interpersonal theory of suicide are borrowed, particularly its concept of Acquired Capability [30]-[32].

Table 4. Summary of push and pull factors found to be consistent significant predictors (α=5%) with suicide ideation, suicide planning, and suicide attempt respectively, 2003-2015.

	SUICIDE IDEATION	SUICIDE PLANNING	SUICIDE ATTEMPT
PUSH FACTORS	• *Experience of being bullied* • *Feeling lonely* • *Lack of sleep*	• *Lack of sleep*	• *Experience of being in a fight* • *Experience of being injured* • *Lack of sleep* • *Experience of missing school without permission*
PULL FACTORS	• *Number of close friends* • *Having parents who understand their troubles*	• *Number of close friends*	• *Number of close friends* • *Perception that classmates are helpful in school* • *Having parents who understand their troubles* • *Having parents who know what they do*

Simply put, it posits an individual who suffers from a lack of social integration as well as aversive conditions might succumb to suicide ideation and planning. In other words, the said individual will be able to fulfill the cognitive aspects of the suicide process. However, not all those who think and plan of suicide would be capable of performing the behavioral aspect of the suicide process because of the aversion or fear of physical pain that is often associated with death. Instead, only those who have developed a tolerance for pain would be willing to proceed with an actual attempt. In this scenario, those who have been in fights and have been injured before are the ones more predisposed to suicide attempt, while whose who share their weak social relationships but not their experience of pain can only deliberate and plan a way to end their life, simply because those who have been in fights and have been injured before already have a familiarity with the pain that the act might and would entail. The two other new significant variables, on the other hand, provide the right opportunity for the actual attempt. Those whose parents are not as attentive to their children would be less able to discourage and even stop an actual attempt, and those who miss school would have the opportune moment while they are alone at home to proceed with the attempt.

Suicide Risk as a whole

The final part of this study attempted to check for the most consistent predictors of suicide. This was done by identifying for each timeframe the variables which proved consistently statistically significant predictors of all three suicide variables. The combination of the three suicide variables was named as Suicide Risk. Table 5 summarizes the findings of the study.

Table 5. Summary of push and pull factors found to be consistently significant predictors (α=5%) of all three suicide indicators, 2003-2015.

	SUICIDE RISK				
	GSHS 2003	*GSHS 2007*	*GSHS 2011*	*GSHS 2015*	*OVERALL*
PUSH FACTORS	• *Experience of being bullied* • *Experience of being injured* • *Lack of sleep*	• *Lack of sleep*	• *Experience of being bullied* • *Lack of sleep*	• *Experience of being bullied* • *Feeling lonely* • *Lack of sleep*	• *Lack of sleep*

Table 5(cont). Summary of push and pull factors found to be consistently significant predictors (α=5%) of all three suicide indicators, 2003-2015.

	SUICIDE RISK				
	GSHS 2003	*GSHS 2007*	*GSHS 2011*	*GSHS 2015*	*OVERALL*
PULL FACTORS	*• Number of close friends*	*• Number of close friends*	*• Experience of being hungry* *• Number of close friends* *• Perception that classmates are helpful in school* *• Having parents who understand their troubles*	*• Number of close friends* *• Perception that classmates are helpful in school* *• Having parents who understand their troubles* *• Having parents who know what they do*	*• Number of close friends*

Notable Push Factors

A total of 3 variables were found to be notable push factors of suicide:

1. Experience of being injured (GSHS 2003)

Being injured was a consistent predictor of suicide during the 2003 timeframe. This is in agreement with the results of other studies [33]-[34]wherein it was found that the experience of pain and injury, be it inflicted by others or oneself, is a risk factor for suicide. In line with the Interpersonal theory of suicide [30], this is because the experiences of being injured habituates the person from the pain associated with suicide, making it less of an aversive task.

2. Feeling lonely (GSHS 2015)

The experience of loneliness was a consistent predictor of suicide during the 2015 timeframe. It was unclear in the study why the high school student respondents were experiencing feelings of loneliness, though psychological appreciation of the phenomenon points to its roots to weak or flawed social integration [35]. As such, the experience of loneliness as a consistent significant predictor to suicide is still in line with the classical Durkheimian tradition of Suicidology wherefrom this study and its theoretical framework traces its roots from. Suicidological literature is rich with studies exhibiting the connection between weakened social relationships such as broken romantic relationships [36]-[37], lack of friends due to being in a new environment [38]-[39] and general feelings of being alone [40]-[41]. This loneliness is also related to the experience of being bullied as well

as the notable pull factors of peer and family integration which shall be discussed later in this paper.

3. Experience of being bullied (GSHS 2003, GSHS 2011, GSHS 2015)

Being a bullying victim has been found to be a consistent predictor of suicide in all timeframes except 2007. This is in line with previous studies on suicide from different parts of the world. In Hinduja and Patchin [42], a random sample of 1,963 middle-schoolers from one of the largest school districts in the United States completed a survey of Internet use and experiences. Youth who experienced traditional bullying or cyberbullying, as either an offender or a victim, had more suicidal thoughts and were more likely to attempt suicide than those who had not experienced such forms of peer aggression. Also, victimization was more strongly related to suicidal thoughts and behaviors than offending – a finding that was supported by the results of Yen et al.'s [43] examination of the correlates of suicide among 5027 Taiwanese adults. In Kim et al.'s study [44] of 1655 7th and 8th grade Korean students, they found that bullying is indeed a significant correlate of suicide, with male bullying victims exhibiting higher rates of suicide attempts, while both female bullying perpetrator and victims exhibiting higher rates of suicide attempts.

Notable Pull Factors

A total of 5 variables were found to be notable pull factors against suicide:
1. Perception that classmates are helpful in school (GSHS 2011, GSHS 2015)

The perception that classmates are helpful in school, which is a sign of strong social integration with one's peers, has been found to be a consistent predictor of suicide in the two most recent timeframes of GSHS in the country. This is in line with similar studies that looked into the effect of school integration with suicide risk in other countries [45]. The inclusion of this predictor as a pull factor could be regarded as an indicator converse to that of the push factor of experiencing bullying, especially since the bullying in this context is most likely situated in the school setting as well where the adolescent spends majority of his or her time awake.

2. Experience of being hungry (GSHS 2011)

As previously discussed, it is unclear why the variable of being hungry turned out to be a pull factor in this study rather than the expectation of the study's theoretical framework that it will serve as a strain that will become a push factor towards suicide – the direction that is also widely supported by other studies in Suicidology. A thought, however, comes to mind when trying to make sense of this surprising finding: in the history of Sociological theories of suicide, one tradition has been to look at suicide and homicide as two sides of the same coin, with the coin being aggressive behavior. Two theories of suicide in Sociology fall under this tradition [46]-[47]. According to Henry and Short,in times of economic instability, high and low status individuals both experience frustration, with the high status individuals expressing their frustration-induced aggression against themselves for failing, and low status individuals directing their aggression towards other people because of a perception that society was unjust to them. Another theory, that of Gold's, is similar to Henry and Short's, but with the predominant premise that the social status of the person's parents who socialized the person on how to handle one's frustration as being more influential than the individual's own social status.

Following the aforesaid theories, could it be that hunger can serve as an indicator of low economic status, and as such, Filipino high school students who experience hunger do not succumb to suicide risk but would instead be more susceptible to aggressive behavior with peers? Future studies are advised to look into this possibility.

3. Having parents who understand their troubles (GSHS 2011, GSHS 2015) and

4. Having parents who know what they do (2015)

The remaining two notable pull factors are the pair of parent-based social relationships that signify social integration (Having parents who understand their troubles) and social regulation (Having parents who know what they do). The salience of these two variables stands parallel with the finding of previous studies on the importance of the family unit as a protective factor against youth suicide among Filipino young adults [36]-[37]. This is also in agreement with several other studies from other countries[48]-[54] which noted the significance of parental attachment and supervision as deterrents to suicide risk among those in the youth age groups. A presentation given by University of Cincinnati professors, Keith King and Rebecca Vidourek, also made salient that children between the ages of 12 and 17 are significantly more likely to contemplate, plan and attempt suicide when parents fail to perform behaviors demonstrative of their care towards their children [55].

The importance of these family-related variables also highlight the family-centric culture of the Philippines where individuals remain in the care and supervision of their parents for a length of time longer than that practiced in Western cultures. This is an interesting juxtaposition to the fact that these individuals in question are adolescents – a stage of an ordinary person's life when there is a tendency to shun away parental attachments in the adolescent's attempt to carve an identity and expose himself or herself to the bigger social environment that he is a part of, including new peer groups and romantic interests. Clearly, though family may no longer be only priority, it remains an important element for these adolescents.

It is also worth noting the presence here of both the integration and regulation elements of the family, hinting that both are vital for suicide prevention rather than just one over the other. In practice, it can be said that the family not only provides the socio-emotional support that adolescents need, especially in times that their self-concept and self-esteem are both shaken as they grow accustomed to their changing roles in life, but also the supervision that deters them from making unsound, risky-behaviors during their trying times.

Most Important Predictors

Out of the 14 variables utilized in the study, only 2 variables proved consistently to be statistically significant predictors of suicide risk with one serving as a pull factor, and the other serving as a push factor.

1. Number of close friends

The number of close friends that the Filipino high school student has was found to be the most consistent pull factor among the four timeframes. This is in agreement with several previous studies that found social integration as a protective element against suicide [56]-[58], especially for girls [59]. This finding also lends greater credence to the emphasis on social integration of the Durkheimian Suicidological tradition. Nevertheless, the consistent statistical significance of this variable raises a number of questions worth exploring in future studies:

First, why is a variable for social integration found to be a consistent statistically significant pull factor against suicide whereas the other element of the Durkheimian tradition, social regulation, was only statistically significant as a pull factor in GSHS 2015 (Having parents who know what they do) whereas other variables of social integration (Perception that classmates are helpful in school as a peer-based variable of social integration and Having parents who understand their troubles as a family-based variable of social integration) were also present as statistically significant predictors in at least one of the four timeframes? Does this mean that social integration is a better predictor of suicide than social regulation? Or perhaps, could it be that Durkheim's typologies of suicide based on social integration, particularly egoistic suicide, is more prevalent among the population under study than the social regulation-based types of suicide? The latter reasoning seems to be more plausible, given that the age range under study are adolescents who crave both familial- and peer-acceptance.

Second, will the efficacy of the quantity of close friends as a pull factor against suicide be consistent regardless of the nature of the friends with whom the person has tight or close relationships with? Or would the efficacy weaken, or even change in direction, according to the nature or disposition of the friends? This question is brought about by the results of previous studies [6],[36] where it was found that among Filipino young adults, affiliation with dancing, singing, and theater groups increases their odds of suicide ideation while affiliation with fraternities, sororities, or gangs increases their odds of suicide attempts. The possible threat to the efficacy of the quantity of close friends as a pull factor is when there is a member of the person's set of close friends who exhibit, or have exhibited, suicidal behavior. It was found in the aforementioned studies that exposure to friends or acquaintances who have attempted suicide before is also a significant push factor toward both suicide ideation and suicide attempt.

Finally, how does one operationalize a close friendship? The quantitative nature of this study that employed close-ended questions to gather limited information restricts the depth of understanding that the results can reach about suicide. In this case, the respondents were merely asked to indicate the number of their close friends. There was no attempt to ask the respondents to qualify how a friendship can be considered a "close" one. Future studies of the qualitative nature are therefore advised to enrich our collective knowledge of the friendship-suicide relationship by delving into the conceptualization and operationalization of such a commonly used, yet ambiguously measured, concept.

2. Lack of sleep

The relationship between sleeplessness, be it in total or in part, and suicide risk is not a completely new observation. Several extant studies have also arrived at similar observations in their own Suicidological research. Observers of the growing literature on the sleeplessness-suicide relationship would often be able to note the existence of two schools of thought trying to provide a theoretical rationale for the aforesaid bivariate relationship. The older camp would explain away the bivariate relationship as nothing more than a spurious correlation brought about by the significant correlation of both sleeplessness and suicide to another common suicide predictor: depression [60]-[61]. In essence, the belief is that people find it difficult to sleep because they are depressed, and depressed persons tend to have higher tendencies for suicidal thoughts and behavior.

Contrary to the above camp's theoretical rationale, empirical studies which controlled for depression still found statistically significant relationships between sleeplessness and suicide. This gave rise to the younger camp that posits that sleeplessness increases suicide risk regardless of the presence or absence of depression. A series of studies have found that beyond depression, sleep problems prove to be statistically significant predictors of suicide ideation and attempts. These sleeping problems include short sleep duration [62]-[63], poor quality of sleep [64], sleep disturbances [65]-[67] particularly nightmares [68]-[70] and insomnia [71]-[73]. Interestingly, even the loss of hope of ever

getting a good night sleep is sufficient to increase suicide risk [74]. In a research specifically focusing on adolescents, it was also found that nightmares are significantly associated with increased suicide ideation, while sleeping less than 8 hours at night and frequent nightmares are significantly associated with increased suicide attempts [75]. A study[76] of roughly 28,000 adolescents in Virginia, USA also found that each hour of sleep lost was associated with an increase in feelings of sadness and hopelessness among teens (38% increase), substance abuse (23% increase), suicidal thoughts (42% increase) and actual suicide attempts (58% increase).

In addition to the aforementioned studies, one qualitative study was able to look into people's views on sleeping [77]. The study's participants underscored the importance of sleep for them as a means of recovery and management of their mental well-being. Hence, the presence of the aversive circumstances of lack of sleep brings about a threefold consequence for the participants:

First, the fact of being awake during night time when other people are generally asleep provides the person at risk of suicide with an opportune time to commit the act with less chances of interference from family members due to the fact that they are caught asleep and unaware of the attempt. Notably, this rationale on the importance of night time as a significant element to suicide is very similar to the rationale given as to why the Lenten season is a prime opportunity for suicide in the Philippines: less potential interference from would-be rescuers [78]. In addition to the element of lessened potential interference, the participants noted that incidences of suicide ideation during nighttime while everyone else is asleep means that these episodes of mental hardship are left without any immediate social support to serve as a protective measure.

Second, at a more biological level, the lack of sleep is perceived by the participants of the study to be an antecedent to other aversive conditions that make life more difficult such as negative thinking, attention difficulties, and inactivity. This rationale also bears similarities with the aforementioned finding [74] that the frustration over not getting a good night sleep is in itself an aversive condition that contributes to suicide risk.

Finally, the third consequence is that the participants who lack sleep feel that their anguish or difficulties are inescapable. According to the participants, the experience of being able to sleep is in

itself a gratifying condition that serves as their form of escape from problems. Ironically, this desire to engage in more sleeping as a way to escape problems lead to some participants sleeping during the day as well, leading to irregular sleeping patterns during night time when they are more alone and vulnerable.

CONCLUSION

This study contributes another piece of the puzzle when it comes to suicide in the Philippines. While the previous works of the author dealt with the theory behind Sociological Suicidology and the prevalence and predictors of suicide among young Filipino adults, this study looked into a new cohort within the Philippine population – the adolescent high school students. As the conclusion of this study, the following insights or issues have been chosen as the most important to focus on for both educated contemplation, policy consideration, and future exploration:

1. The prevailing importance of close friends.

In her discussion of the development of children into adolescents, Eccles [79] described the period of adolescence as such,

> "*In early adolescence, the tumultuous physical and social changes that accompany puberty, the desire for autonomy and distance from the family, and the transition from elementary school to middle school or junior high can all cause problems for young people. When adolescents are in settings (in school, at home, or in community programs) that are not attuned to their needs and emerging independence, they can lose confidence in themselves and slip into negative behavior patterns such as truancy and school dropout.*"

It is at this stage that the adolescent experiences a "broadening" of his or her social world, and the monopoly of the family in his or her life is shattered. Instead, the adolescent becomes exposed to other agents in society such as the school and the peer group – this latter group being one whose approval and acceptance the adolescent often takes pains to achieve and keep. When such a need for approval and acceptance is denied, be it intentional or not, of the adolescent, the consequence could be one or more of the negative behavior patterns as discussed by Eccles. Indeed, researchers have noted the value ascribed by adolescents to the peer group, noting that compared to children and adults, adolescents are highly focused on

being evaluated by their peers, and their well-being is significantly influenced by their acceptance or non-acceptance in the peer group [80].

Peer groups, or friendships, are very important to a collectivist culture such as the Filipinos. In fact, in a qualitative study involving Filipino adolescents, researchers found that while blood relations remain at the top of the hierarchy when it comes to the concept of "family", non-blood relations in the form of close friends are regarded by many adolescent Filipinos as included in their concept of "family" as well[81]. Connecting it to the school setting where most of the adolescent's time is spent, it was also found in another study that one way by which young Filipino students conceptualize the school is such that it is a place where they are with friends, thereby emphasizing the need for the school to remain a place where friendly relationships are formed and enriched[82].

Why is there such an importance ascribed to close friends? In the context of the Philippines, the peer group, or the "*kaibigan*" or "*barkada*" in the native tongue, are beneficial and therefore desirable to adolescents for two possible reasons:

First, in a culture such as the Philippines where the divide in authority between adults and the youth are often clearly defined and highly reinforced, the youth are able to express themselves with greater ease and comfort when they are among their *barkada* as compared to when they are in the presence of adult authorities. It is in these *barkadas* that they are able to express opinions which would otherwise be frowned upon by adults, or ask questions which the adults may not want to discuss, possibly due to conservatism [83]-[84]. This is the case for issues like sexuality and reproduction, religion, and politics.

Second, the changes in Philippine society that forced both mother and father to work, sometimes domestically or sometimes abroad as members of the large Filipino overseas workforce, has brought about a phenomenon of parental absenteeism which left children at the care of extended family members. Consequently, the youth turns to their friends, for friendship and companionship, for nurturance, intimacy, security, and guidance. This is especially true for the high school group of friends which the researchers found to be the most long-lasting.

The importance of peer group integration and the consequent danger of social isolation has not been missed by the Filipino lawmakers. In 2013, President Benigno Simeon Aquino III signed into law R.A. No. 10627 or what is more popularly known as the Anti-

Bullying Act of 2013. In the aforesaid law, bullying was defined as,

"… *any severe or repeated use by one or more students of a written, verbal or electronic expression, or a physical act or gesture, or any combination thereof, directed at another student that has the effect of actually causing or placing the latter in reasonable fear of physical or emotional harm or damage to his property; creating a hostile environment at school for the other student; infringing on the rights of the other student at school; or materially and substantially disrupting the education process or the orderly operation of a school; such as, but not limited to, the following:*

a. Any unwanted physical contact between the bully and the victim like punching, pushing, shoving, kicking, slapping, tickling, headlocks, inflicting school pranks, teasing, fighting and the use of available objects as weapons;

b. Any act that causes damage to a victim's psyche and/or emotional well-being;

c. Any slanderous statement or accusation that causes the victim undue emotional distress like directing foul language or profanity at the target, name-calling, tormenting and commenting negatively on victim's looks, clothes and body; and

d. Cyber-bullying or any bullying done through the use of technology or any electronic means."

In particular, the Anti-bullying law prohibits the following acts:

"*(1) Bullying on school grounds; property immediately adjacent to school grounds; at school-sponsored or school-related activities, functions or programs whether on or off school grounds; at school bus stops; on school buses or other vehicles owned, leased or used by a school; or through the use of technology or an electronic device owned, leased or used by a school;*

(2) Bullying at a location, activity, function or program that is not school-related and through the use of technology or an electronic device that is not owned, leased or used by a school if the act or acts in question create a hostile environment at school for the victim, infringe on the rights of the victim at school, or materially and substantially disrupt the

education process or the orderly operation of a school; and

(3) Retaliation against a person who reports bullying, who provides information during an investigation of bullying, or who is a witness to or has reliable information about bullying."

The passage of the law and its subsequent implementation is expected to help reduce the sense of social isolation that Filipino children and adolescents might experience in Philippine primary and secondary educational institutions. This is especially relevant in recent years due to incidences of bullying that has reportedly become prime causes of suicide, some of which have caught the attention of mainstream and social media [85]-[90].

2. Sleeplessness in a fast-paced world.

It became clear in this study that sleep – a basic human physiological need – is very much important in curbing suicide prevalence. The salience of lack of sleep as the most important push factor of suicide risk in this study may serve as a critique of the material conditions that we live in today. The demands of today's fast-paced society has almost made the satisfaction of a basic physiological need into either a luxury or an afterthought. In a lifestyle survey by Philam Life in 2016 [91], Filipinos were found to be among the most sleep-deprived among 15 countries in the Asia Pacific Region, with 46% Filipinos reportedly being sleep-deprived. This is despite the fact that Filipinos believe that sleep is the most important driver of health. According to the results of the survey, Filipinos ideally want to have an average of 8.2 hours of sleep, but only get an average of 6.8 hours, leading to an average deficit of 1.4 hours – a deficit that is one of the highest among the 15 countries studied. The deprivation in sleep is not surprising in a society that demands much from its citizens. A typical Filipino who commutes to and from work or school in an urban area such as Metro Manila loses 1000 hours per year to traffic congestion – hours which could have been used for other pursuits including rest. This is a far cry from the 300 hours spent per year by commuters of other countries[92]. Filipinos are, in other words, sacrificing sleep for unpaid labor, all the while exposing themselves to the other threats to health associated with commuting. Another contributor to the sleep deprivation of Filipinos are perhaps the demands of work that intrudes into people's would-be sleeping hours, or in

the case of students, the demands of scholastic work. In the latest Young Adult Fertility and Sexuality Study [93], for example, it has been observed that Filipinos' number of sleeping hours tend to decline as they achieve higher educational attainment.

Special attention should be given to the sleep deprivation in the academe. It might be time to reflect on the practices in the country's current educational system and its unintended consequences on the mental health of its stakeholders. Having taught at the senior high school, undergraduate, and the graduate level, the author has observed how sleeping has become a luxurious afterthought due to a high amount of academic requirements. A casual observer may opine that academic requirements are manageable with proper time management. The reality, however, is not as comfortable. Academic requirements often pile-up in particular parts of a school term, and some requirements are not doable until certain lessons are taught within the term. Furthermore, policy-makers and other readers must face the reality that in today's competitive society, students are pressured to take on several tasks and responsibilities at the same time. Aside from their curricular works, students are often pressured to engage in extra-curricular activities to pad up their resume or curriculum vitae with the goal of improving their competitive edge either as future members of the workforce or for the limited doors of opportunity in scholarships and higher studies either within the country or abroad. Indeed, the overbearing climate of the academe that requires much of its participants has caught public attention in the previous year after practices in the academe have reportedly contributed a big deal to the suicide of two teachers [94]-[96]. It is time to reflect on the realities of today's academe and make efforts to reduce redundant and unnecessary workloads, as well as adopt steps in teaching the stakeholders how to cope healthily when the pressure becomes increasingly unbearable. As of this paper's writing, a bill has been filed in Congress - House Bill No. 569 – which seeks to ban the holding of classes earlier than 8:30 AM [97]. There are many reasons identified by the bill for its proposed measure, with mental health being one of those mentioned. It remains to be seen what the fate of the aforesaid bill will be.

The above-mentioned discussion, however, does not intend to put all the blame for sleeplessness on the abovementioned factors. There are other potential factors at play. The National Adolescent and Young Adult Health Information Center in the United States

[98], for example, identified the following factors that may contribute to adolescent sleeplessness: (1) hormonal time shift in sleep cycles and its conflict with early school start times, (2) hectic after-school schedules, (3) leisure activities that contribute to late bedtimes, (4) light exposure from televisions, computers, and mobile phones that cues the brain to stay awake, (5) social attitudes that give premium to being active instead of sleeping, (6) sleep disorders, and (7) a vicious cycle where insufficient sleep causes the brain to become more active, leading to more sleeplessness.

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REFERENCES

[1] Department of Health. (n.d.). A Situationer on Adolescents Health. Retrieved April 20, 2018 from http://www.doh.gov.ph/adolescent-and-youth-health-program.

[2] Butuyan, J.R. (2016). Seven Filipinos commit suicide every day. Inquirer. Retrieved July 22, 2018, from http://opinion.inquirer.net/95929/seven-filipinos-commit-suicide-every-day.

[3] [3] Elemia, C. (2018). Duterte signs Philippine Mental Health Law. Rappler. Retrieved July 4, 2018, from https://www.rappler.com/nation/205425-duterte-signs-mental-health-lawservices-philippines.

[4] [4] Villanueva, J. (2016). Senate Bill 1163: Youth Suicide Prevention Act. Senate of the Philippines, 17th Congress. Retrieved June 1, 2018 from https://www.senate.gov.ph/lisdata/2486321417!.pdf.

[5] Villafuerte, L.R. (2018). House Bill: 7858: An Act to Provide Youth Suicide Prevention and Intervention. House of Representatives, 17th Congress. Retrieved January 1, 2019 from http://www.congress.gov.ph/legisdocs/basic_17/HB07858.pdf.

[6] Quintos, M.A. (2019). Who are knocking on Death's door?: Predictors of Suicide Attempt among Young Filipino Suicide Ideators. Asia-Pacific Journal of Multidisciplinary Research, 7(1): 11-24.

[7] Quintos, M.A. (2017a). Towards a Push-Pull Theoretical Understanding in the Sociology of Suicide: Revisiting what we know and what we can explore. Silliman Journal, 58(2).

[8] Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. Criminology, 30, 47–87.

[9] Hirschi, T. (1969). Causes of Delinquency. Berkeley: University of California Press.

[10] Khalid, R. (2012). Suicide Ideation and Its Associated Risk Factors among Adolescent Students in the Eastern Mediterranean Region. Georgia State University. Retrieved August 14, 2018, from https://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1252&context=iph_theses.

[11] Asante, K.O., Kugbey, N., Osafo, J., Quarshie, E.N. & J.O. Sarfoe. (2017). The prevalence and correlates of suicidal behaviours (ideation, plan and attempt) among adolescents in senior high schools in Ghana. SSM-Population Health, 3, 427-434.

[12] Almansour A. and S. Siziya. (2017). Suicidal ideation and associated factors among school going adolescents in Swaziland. African Health Sciences, 17(4): 1172-1177.

[13] Mcintyre, L., Williams, J., Lavorato, D. & S. Patten. (2013). Depression and suicide ideation in late adolescence and early adulthood are an outcome of child hunger. Journal of Affective Disorders, 150(1): 123-129.

[14] Martin, M.S., Maddocks, E., Chen, Y., Gilman, S.E. & I. Colman. (2016). Food insecurity and mental illness: disproportionate impacts in the context of perceived stress and social isolation. Public Health, 132: 86-91.

[15] Atuoye, K.N. and I. Luginaah. (2017). Food as a social determinant of mental health among household heads in the Upper West Region of Ghana. Social Science & Medicine, 180: 170-180.

[16] Jones, A. (2017). Food insecurity and mental health status: A global analysis of 149 countries. American Journal of Preventive Medicine, 53(2): 264-273.

[17] Alaimo, K., Olson, C. & E. Frongillo. (2002). Family food insufficiency, but not low family income, is positively associated with Dysthymia and Suicide symptoms in adolescents. Journal of Nutrition, 132(4): 719-725.

[18] Romo, M., Abril-Uloa, V. & E. Kelvin. (2016). The relationship between hunger and mental health outcomes among school-going Ecuadorian adolescents. Social Psychiatry and Psychiatric Epidemiology, 51(6): 827-837.

[19] Leung, C., Epel, E., Willett, W., Rimm, E. & B. Laraia. (2015). Household food insecurity is positively associated with depression among low-income supplemental nutrition assistance program participants and income-eligible nonparticipants. Journal of Nutrition, 145(3): 622-627.

[20] Davison, K.M., Marshall-Fabien, G.L. & A. Tecson. (2015). Association of moderate and severe food insecurity with suicidal ideation in adults: national survey data from three Canadian provinces. Social Psychiatry and Psychiatric Epidemiology, 50(6): 962-972.

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Asia Pacific Journal of Education, Arts and Sciences, Volume 7, No. 2, April 2020

[21] Taliaferro, L., Eisenberg M., Johnson K., Nelson, T. & D. Neumark-Sztainer. (2011). Sport participation during adolescence and suicide ideation and attempts. International Journal of Adolescent Medicine and Health, 23(1): 3-10.

[22] Chioqueta, A. & Stiles, T. (2007). Cognitive factors, engagement in sport, and suicide risk. Archives of Suicide Research, 11(4): 375-390.

[23] Taliaferro, L., Rienzo, B., Pigg, R.M., Miller, M.D. & V. Dodd. (2009). Associations between physical activity and reduced rates of hopelessness, depression, and suicidal behavior among college students. Journal of American College Health, 57(4): 427-436.

[24] Mammen, G. & Faulkner, G. (2013). Physical activity and the prevention of depression: A systematic review of prospective studies. American Journal of Preventive Medicine, 45(5): 649-657.

[25] Eime R., Young, J., Harvey, J., Charity, M. & W. Payne. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. International Journal of Behavioral Nutrition and Physical Activity, 10(98).

[26] Dykens E., Rosner B. & Butterbaugh, G. (1998). Exercise and sports in children and adolescents with developmental disabilities. Positive physical and psychosocial effects. Child and Adolescent Psychiatric Clinics of North America, 7(4): 757-771.

[27] Taliaferro, L. (2010). Relationships between youth sport participation and selected health risk behaviors From 1999 to 2007. Journal of School Health, 399-410.

[28] Valois, R.. (2004). Physical activity behaviors and perceived life satisfaction among public high school adolescents. Journal of School Health, 59-65.

[29] Lee, C.G. Cho, Y. & S. Yoo. (2013). The Relations of Suicidal Ideation and Attempts with Physical Activity Among Korean Adolescents. Journal of Physical Activity and Health, 10: 716-726.

[30] Joiner, T. (2005). Why people die by suicide. Cambridge, MA: Harvard University Press.

[31] Joiner, T. (2010). Overcoming the fear of lethal injury: Evaluating suicidal behavior in the military through the lens of the interpersonal–psychological theory of suicide. Clinical Psychology Review, 30(3): 298-307.

[32] Christensen, H., Batterham, P. J., Soubelet, A., & A.J. Mackinnon. (2013). A test of the interpersonal theory of suicide in a large community-based cohort. Journal of Affective Disorders, 144(3): 225-234.

[33] Smith, P., Selwyn, C., D'amato, D., Granato, S., Kuhlman, S. & J. Mandracchia. (2016). Life experiences and the acquired capability for suicide in incarcerated men. Death Studies, 40(7): 432-439.

[34] Roy, A., Carli, V., Sarchiapone, M. & M. Branchey. (2014). Comparisons of prisoners who make or do not make suicide attempts and further who make one or multiple attempts. Archives of Suicide Research, 18(1): 28-38.

[35] Rubin, G. (2017). 7 types of loneliness, and why it matters. Psychology Today. Retrieved August 15, 2018 from https://www.psychologytoday.com/us/blog/the-happiness-project/201702/7-types-loneliness-and-why-it-matters.

[36] Quintos, M.A. (2017b). Prevalence of suicide ideation and suicide attempts among the Filipino youth and its relationship with the family unit. Asia-Pacific Journal of Multidisciplinary Research, 5(2): 11-23.

[37] Quintos, M.A. (2017c). Predictors of Suicide Ideation among the Filipino Youth: Findings from a Nationally Representative Survey of Filipinos Aged 15 to 27. Journal of Multidisciplinary Studies, 6(2): 1-16.

[38] Kposowa, A., Mcelvain, J., & K. Breault. (2008). Immigration and suicide: The role of marital status, duration of residence, and social integration. Archives of Suicide Research, 12(1): 82-92.

[39] Lester, D. & Abe, K. (1998). The suicide rate by each method in Japan: A test of Durkheim's theory of suicide. Archives of Suicide Research, 4, (3): 282-285.

[40] Stravynski, A. & Boyer, R. (2001). Loneliness in relation to suicide ideation and parasuicide: a population-wide study. Suicide and Life Threatening Behavior, 31(1): 32-40.

[41] Van Orden, K., Witte, T., James, L., Castro Y., Gordon, K., Braithwaite, S., Hollar, D., & T. Joiner. (2008). Suicidal ideation in college students varies across semesters: the mediating role of belongingness. Suicide and Life Threatening Behavior, 38(4): 427-435.

[42] Hinduja, S. & Patchin, J. (2010). Bullying, cyberbullying, and suicide. Archives of Suicide Research, 14 (3): 206-221.

[43] Yen, C., Lai, C., Ko, C., Liu, T., Tang, T., Wu, Y. & Yang, P. (2013). The associations between suicide ideation and attempt and anxiety symptoms and the demographic, psychological, and social moderators in Taiwanese adolescents. Archives of Suicide Research, 18(1): 104-116.

[44] Kim, Y.S., Leventhal, B., Koh, Y., & T. Boyce. (2009). Bullying increased suicide risk: Prospective study of Korean adolescents. Archives of Suicide Research, 13(1): 15-30.

[45] Sheftall, A., Asti, L., Horowitz, L., Felts, A., Fontanella, C., Campo, J., & Bridge, J. (2016). Suicide in elementary school-aged children and early adolescents. Pediatrics, 138(4).

[46] Douglas, J. (1967). The Social Meanings of Suicide. Princeton University Press: New Jersey.

[47] Bills, C. (2017). The Relationship between Homicide and Suicide: A narrative and conceptual review of violent death. International Journal of Conflict and Violence, 11(6).

[48] Mahfoud Z., Afifi R., Haddad P. & Dejong, J. (2011). Prevalence and determinants of suicide ideation among Lebanese adolescents: results of the GSHS Lebanon 2005. Journal of Adolescence, 34(2):379-384.

[49] Badr, H.E. (2015). Suicidal Behaviors Among Adolescents – The role of school and home environment findings from a cross-sectional national-based survey. Crisis, 38: 168-176.

[50] Peltzer, K. & Pengpid, S. (2012). Suicidal Ideation and Associated Factors among School-Going Adolescents in Thailand. International Journal and Environmental Research and Public Health, 9(2): 462-473.

[51] Hardt, J., Egle, U.T. & Johnson, J.G. (2007). Suicide attempts and retrospective reports about parent-child relationships: evidence for the affectionless control hypothesis. GMS Psych-Social-Medicine, 4.

[52] Consoli, A., Peyre, H., Speranza, M., Hassler, C., Falissard, B., Touchette, E., Cohen, D., Moro, M.R. & Révah-Lévy, A. (2013). Suicidal behaviors in depressed adolescents: role of perceived relationships in the family. Child and Adolescent Psychiatry and Mental Health, 7(8).

[53] Ferguson, D.M., Woodward, L.J. & Horwood, L.J. (2000). Risk factors and life processes associated with 23-39.

[54] Saffer, B., Glenn, C. & Klonsky, D. (2015). Clarifying the relationship of parental bonding to suicide ideation and attempts. Suicide and Life Threatening Behavior, 45(4): 518-528.

[55] University of Cincinnati. (2017). Parenting behaviors linked to suicide among adolescents: Junior high school-aged children at significantly higher risk than peers when parents are not emotionally responsive. ScienceDaily. Retrieved June 8, 2019 from www.sciencedaily.com/releases/2017/12/171205091558.htm

[56] Tsai, A., Lucas, M. & Kawachi, I. (2015). Association between social integration and suicide among women in the United States. JAMA Psychiatry, 72(10): 987-993.

[57] Kuramoto, S.J., Wilcox, H.C. & Latkin, C.A. (2013). Social Integration and Suicide-related Ideation from a Social Network Perspective: A Longitudinal Study among Inner-City African Americans. Suicide and Life Threatening Behavior, 43(4): 366-378.

[58] Bearman, P.S. & Moody, J. (2004). Suicide and friendships among American adolescents. American Journal of Public Health, 94(1): 89-95.

[59] Winterrowd, E., Canetto, S. & Chavez, E. (2010). Friendships and suicidality among Mexican American adolescent girls and boys. Death Studies, 34(7): 641-660.

[60] Ağargün, M.Y., Kara, H. & Solmaz, M. (1997). Subjective sleep quality and suicidality in patients with major depression. Journal of Psychiatric Research, 31(3): 377-381.

[61] Krakow, B., Artar, A., Warner, T.D., Melendrez, D., Johnston, L., Hollifield, M., Germain, A. & Koss, M. (2000). Sleep disorder, depression, and suicidality in female sexual assault survivors. Crisis, 21(4): 163–70

[62] Littlewood, D., Kyle, S., Carter, L.A., Peters, S., Pratt, D. & Gooding, P. (2019). Short sleep duration and poor sleep quality predict next-day suicidal ideation: an ecological momentary assessment study. Psychological Medicine, 49(3): 403-411.

[63] Kim, S.Y., Sim, S. & Choi, H.G. (2017). High stress, lack of sleep, low school performance, and suicide attempts are associated with high energy drink intake in adolescents. PLoS ONE 12(11): e0187759.

[64] Bernert, R., Turvey, C. & Conwell, Y. (2014). Association of poor subjective sleep quality with risk for death by suicide during a 10-year period: A longitudinal, population-based study of late life. JAMA Psychiatry, 71(10): 1129-1137.

[65] Bernert, R., Kim, J., Iwata, N. & Perlis, M. (2015). Sleep disturbances as an evidence-based suicide risk factor. Current Psychiatry Reports, 17(15): 1535-1645.

[66] Pigeon, W.R., Pinguart, M. & Conner, K. (2012). Meta-analysis of sleep disturbance and suicidal thoughts and behaviors. Journal of Clinical Psychiatry, 73(9): e1160-1167.

[67] Bernert, R., Hom, M., Iwata N., & Joiner, T. (2017) Objectively assessed sleep variability as an acute warning sign of suicidal ideation in a longitudinal evaluation of young adults at high suicide risk. Journal of Clinical Psychiatry, 78(6): e678-e687.

[68] Agargun, M.Y., Besiroglu, L., Cilli, A.S., Gulec, M., Aydin, A., Inci, R. & Selvi, Y. (2007). Nightmares, suicide attempts, and melancholic features in patients with unipolar major depression. Journal of Affective Disorders, 98(3): 267-270.

[69] Golding, S., Nadorff, M.R., Winer, E.S., & Ward, K.C. (2015). Unpacking sleep and suicide in older adults in a combined online sample. Journal of Clinical Sleep Medicine, 11(12): 1385-1392.

[70] Suzanszky, E., Hajnal, A. & Kopp, M. (2011). Sleep disturbances and nightmares as risk factors for suicidal behavior among men and women. Psychiatria Hungaria, 26(4): 250-257.

[71] Ribeiro, J.D., Pease, J.L., Gutierrez, P.M., Silva, C., Bernert, R.A., Rudd, M.D. & Joiner, T.E. (2012). Sleep problems outperform depression and hopelessness as cross-sectional and longitudinal predictors of suicidal ideation and behavior in young adults in the military. Journal of Affective Disorders, 136(3):743-750.

[72] Nadorff, M.R., Fiske, A., Sperry, J.A., Petts, R. & Gregg, J.J. (2013). Insomnia symptoms, nightmares, and suicidal ideation in older adults. The Journals of Gerontology: Series B, Psychological Sciences and Social Sciences, 68(2): 145-152.

[73] Nadorff, M.R., Anestis, M.D., Nazem, S., Claire, H. & Samuel, W. (2014). Sleep disorders and the interpersonal-psychological theory of suicide: independent pathways to suicidality?. Journal of Affective Disorders, 152-154: 505-512.

[74] McCall, W., Batson, N., Webster, M., Case, L., Joshi, I., Derreberry, T., Mcdonough, A. & Farris, S. (2013). Nightmares and dysfunctional beliefs about sleep mediate the effect of insomnia symptoms on suicidal ideation. Journal of Clinical Sleep Medicine, 9(2): 135-140.

[75] Liu, X. (2004). Sleep and adolescent suicidal behavior. Sleep, 27(7): 1351-1358.

[76] Winsler, A., Deutsch, A., Vorona, R.D., Payne, P.A., & Szklo-Coxe, M. (2015). Sleepless in Fairfax: the difference one more hour of sleep can make for teen hopelessness, suicidal ideation, and substance use. Journal of Youth and Adolescence, 44(2): 362-378.

[77] Littlewood, D., Gooding, P., Kyle, S., Pratt, D. & Peters, S. (2016). Understanding the role of sleep in suicide risk: qualitative interview study. BMJ Open, 6(8).

[78] Uy, J. (2012). Suicides up in last 20 years in PH, mostly among young – NSO. Inquirer. Retrieved August 1, 2018 from http://newsinfo.inquirer.net/229227/suicides-up-in-last-20-years-in-ph-   mostly-among-young-nso.

[79] Eccles, J. (1999). The Development of Children Ages 6 to 14. The Future of Children, 9(2).

[80] Guyer, A., Caouette, J., Lee, C. & Ruiz, S. (2014). Will they like me? Adolescents' emotional responses to peer evaluation. International Journal of Behavioral Development, 38(2): 155-163.

[81] Garo-Santiago, M.A., Mansukhani, R. & Resurreccion, R. (2009). Adolescent identity in the context of the Filipino family. Philippine Journal of Psychology, 42(2): 175-193.

[82] Potts, A., Maadad, N., Yu, M. & Huang, Y. (2017). "My friends are there": Constructions of schooling of children of Filipino immigrants in South Australia. Cogent Education, 4(1).

[83] Philippine Social Science Council. (2003). The Filipino Youth: Some findings from research. Quezon City, The Philippines: Philippine Social Science Center.

[84] Gastardo-Conaco, M.C., Jimenez, M.C. & C.J. Billedo. (2003). Filipino adolescents in changing times. Quezon City, The Philippines: University Center for Women's Studies and Philippine Center for Population Development.

[85] Delavin, I.C. (2016). Filipinos among the least healthy in Asia – survey. Business World Online. Retrieved January 1, 2019, from http://www.bworldonline.com/content.php?section=Nation&title=filipinos-among-the-least-healthy-in-asia----survey&id=129663.

[86] Tupas, E. (2017). Student kills self over bullying, grades. The Philippine Star. Retrieved January 11, 2019 from https://www.philstar.com/metro/2017/10/14/1748918/student-kills-self-over- bullying-grades.

[87] McCloskey, J. (2018). 'You destroyed a family' sister of bisexual teen driven to suicide blasts bullies. Metro. Retrieved January 11, 2019 from https://metro.co.uk/2018/02/05/destroyed-family-sister-bisexual-teen-driven-suicide-blasts-bullies-7289588/.

[88] Ozaeta, A. (2013). Bullying blamed for Batangas teen's suicide. ABS-CBN News. Retrieved January 11, 2019 from https://news.abs-cbn.com/nation/regions/03/21/13/bullying-blamed-batangas-teens-suicide.

[89] Alipala, J. (2014). 'Bullied' teen kills self in Zamboanga Sibugay. Inquirer. Retrieved January 11, 2019from https://newsinfo.inquirer.net/638438/bullied-teen-kills-self-in-zamboanga- sibugay.

[90] Gallos, J. (2018). Dahil sa pambu-bully, Grade 10 student, nagpatiwakal. Remate. Retrieved January 11, 2019 from https://remate.ph/2018/07/03/dahil-sa-pambu-bully-grade-10-student-nagpatiwakal/.

[91] Filipinos score low on the 2016 healthy living index due to unhealthy habits. (2016). Philam Life. Retrieved July 1, 2019, from https://www.philamlife.com/en/about-philamlife/media-centre/press- releases/2016/filipinos-score-low-on-2016-healthy-living-index.html

[92] Ordinario, C. (2015). Pinoys waste 28,000 hours in 'traffic'. Business Mirror. Retrieved January 1, 2019 from https://businessmirror.com.ph/pinoys-waste-28000-hours-in-traffic/.

[93] Demographic Research and Development Foundation (Drdf) and University of the Philippines Population Institute (UPPI). (2014). 2013 YAFS4 Key Findings. Quezon City: DRDF and UPPI.

[94] Dela Cruz, J.M. & Mocon-Ciriaco, C. (2018). Suicide of teachers, children prompts call for govt action. Business Mirror. Retrieved January 1, 2019 from https://businessmirror.com.ph /suicide-of-teachers-children-prompts-call-for-govt-action/.

[95] Esguerra, D.J. (2018). DepEd urged to lighten teacher workloads following suicide reports. Inquirer. Retrieved January 1, 2019 at https://newsinfo.inquirer.net/1025288/deped-urged-to-lighten-teacher- workloads-following-suicide-reports.

[96] Ramos-Araneta, M. (2018). Two senators alarmed over suicide tries of teachers. Manila Standard. Retrieved January 1, 2019 from http://manilastandard.net/news/national/274751/two-senators-alarmed- over-suicide-tries-of-teachers.html.

[97] Roxas, P. A. (2019). House bill seeks to ban classes set for earlier than 8:30 a.m. Inquirer. Retrieved July 7,

2019, from https://newsinfo.inquirer.net/1137504/house-bill-seeks-to-ban-classes-set-for-earlier-than-830-a-m.

[98] National Adolescent and Youth Adult Health Information Center. (2014). Sleep Deprivation in Adolescents and Young Adults. Retrieved January 1, 2019, from http://nahic.ucsf.edu/wp-content/uploads/2014/08/Sleep-Brief-FINAL.pdf.

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