

Internet Addiction As Correlates To Depression and Life Satisfaction

Christ Michael C. Entienza^a

Article History: Received: 10 November 2020; Revised 12 January 2021 Accepted: 27 January 2021; Published online: 5 April 2021

Abstract: Common behavioral problem described as an impulse control disorder which doesn't include the use of an intoxicating drug very similar to pathological, is known as Internet Addiction, a rampant disorder during the digital age. This study looked into the relationship of internet addiction towards depression and life satisfaction. Two hundred respondents from various courses of a State University were chosen using fishbowl sampling. The Philippine Student Health Questionnaire was administered and 100% test results were retrieved. Results showed that most of the respondents are average users. There are also significant numbers who are problematic and the least were excessive users. Most respondents were suffering from mild depression and worryingly there were respondents having moderately severe and severe depression. For life satisfaction, results shows that most respondents are satisfied while some reported that they are slightly satisfied and least reported are dissatisfied. Statistics showed that there is no significant correlation between internet addiction and life satisfaction; however, there is a positive correlation between internet addiction and depression. Results highly suggests exerting efforts for awareness in regulating proper usage of internet such as time management. For Life Satisfaction, it is suggested to continue and share lifestyle practices which contribute to satisfaction and work on areas that need improvement promoting better life satisfaction.

Keywords: internet addiction, depression, life satisfaction

1. Introduction

The dawn of the 21st century became a turning point in the history and the way of life. This era welcomed the Fourth Industrial Revolution also known as the Digital Revolution that has a great impact on every aspect of human life. This fourth revolution is a mix of technologies which is bridging the gap between the physical, digital and biological areas. The Industrial Revolution also greatly influenced the way of living of people specifically the young generation also known as Gen Z. This generation is internet savvy and they literally grew up with the Internet as part of their lives (Cheung, McCarty & Wong 2017). Particularly, the Internet took the center stage which enhanced and changed the way we connect with one another across generations from baby boomers to gen z and across culture, almost everything is one click away. In Asia, there are billions of Internet users which amount to 46% of the total population in the internet world (ADMA, 2015). Ranking 6th in Asia and in 2nd Southeast Asia, the Philippines has over

44.2 million users which is expected to double (Persaud, 2017)

The Internet paved the way for convenience, easy access to information and connectivity. It broke borders in communications such as those families who are separated by great distance due to work, even helping to find lost relations, made financial transactions easier and calibrated processes that generally provided convenience, to name a few. In the academe, internet and connectivity helped research and other student academic concerns as it provided vast data sources on various topics not having to go to several libraries to browse books and get little content. One click offers a range of references with minimum effort and time consumption. As much as the Internet provided faster avenues, this also came with undesirable impact, distinctively on behavior and mental health. Excessive amount of time was observed being used on social media, games and pornography. As reported by Rappler (2016), Filipino millennials are the top most users of internet who, above all others wants to stay connected and get real-time updates spending 5.2 hours (desktop and tablets) and 3.2 hours (mobile). Spending so much time on the Internet also showed alarming negative influences to the youth as study showed that excessive users tended to be anxious, depressed and get into fights often (Goel, Subramanyam & Kamath 2013).

In response to the growing misconducts in using the Internet, the Philippines passed RA 10175, or its Cybercrime Prevention Act last 2012 hoping to spread awareness, security, and prevention and come down on those using the internet in devious ways. As for the University, it takes measures in its vision of becoming the Premier Campus in the Region promoting quality and responsive academic programs achieving this through productive educational innovations and good governance, of which results of this study can contribute to. Guided likewise by its Mission in consonance with the

University's philosophy that affirms and avows itself to be a major instrument for the development of the citizenry and the enhancement of nation building by providing quality education and producing seasoned individuals who are highly employable, productive, socially responsible and competent professionals. Supporting the University's research agenda of social and cultural development of its stakeholders, specifically Human Development and Social Protection, Public Personnel Management and development, Social Welfare is one of the aim goals to be accomplished by this research.

What schools can do is to help prevent and moderate the overuse and misuse of the internet, which is, to put it briefly, called Internet Addiction. Griffith (2008, as cited by Goel, Subramanyam, & Kamath, 2013) defined it as a subset of behavior addiction that meets the six core components of addiction; tolerance, salience, withdrawal, mood modification, conflict, and relapse. Young, as cited in Waldo (2014), stated that internet addiction is like pathological disorders having impulse-control disorder excludes intoxicant. Shapira, as cited in Bastani (2008) suggested that, it may be a different form of obsessive-compulsive disorder. Despite lacking a common definition, most researchers look toward excessive and unfettered use of the internet using certain applications online, leading to problematic hours (Frangos, Frangos, & Sotiropoulos, 2011). A tragic numerous headline had captured the attention of the public that is in relation to compulsive internet use Wallace (2015). Goel, Subramanyam, and Kamath (2013) stated that while the internet is used by some to seek information, facilitate research, business transactions and interpersonal communication, others use it for too much gaming, pornography, extensive hours chatting, and gambling. Meanwhile, Whisman (2015) also mentioned that given the pervasive nature of technology, likewise the internet in present society, loss of control is widespread and may result to negative impacts on daily life function, peer and family interactions, academic performance and psychological wellbeing in general. Moreover, people who spend much time on the internet is subject to feelings of isolation that causes mood declines and low life satisfaction given the nature of online activities as performed in solitude and potentially removes interactive social activities (Lissitsa & Chachashvili-Bolotin, 2015). Additionally, compulsive internet use were reported by researchers, reflecting internet addiction, and dependent on internet, pathological or problematic use, and related to lower psychological mental state. Further, there are suggestions that there could be some relationship with the use of internet and depression. One of them is a two-year longitudinal study conducted by Young and Kraut (Valiputhenpurayil, 2005) who investigated 169 people on 73 households regarding the effects of internet on social involvement and psychological health and one of their major findings was that using the internet exhibits increase in loneliness and depression.

Clearly this is a present-day and developing phenomenon and few studies have been made locally. Which is why this study explored the level of Internet addiction in a State University in the Philippines as these are uncommon studies and only concentrated on the Urban areas and to correlate Internet Addiction with Depression and Life satisfaction. Specifically, it answered the questions, (1) What is the level of internet

addiction of the respondents (2) What is the level of depression of the respondents (3) What is the level of life satisfaction of the respondents (4) Is there a significant relationship between internet addiction and depression (5) Is there a significant relationship between internet addiction and life satisfaction.

2. Method

The study utilized a descriptive-correlation method wherein practices and beliefs that prevail were described and relationships were determined. Cluster sampling was employed to gather 200 respondents from nine programs in the university, majors include social sciences making up 49.50%, engineering with 37.50% and Industrial having 13%. Year level ranges from First year to Fifth year. Respondents' age, ranges from 16 to 24 years old, and sex is a combination of boys being, 40% and girls, 60%. Most came from middle economic level making up 86.50%, and least were from low having only 4%. Respondents were briefed and assured of treating the data with highest confidentiality. The study utilized and administered the Philippine University Student Health Survey – a 4 part questionnaire having total of 43 items that uses likert scale. This instrument acquires demographics, and measures the levels of Internet Addiction as average, problematic or excessive users, having strong internal consistency (Cronbach's $\alpha = .93$) and has 20 items. Depression with Cronbach alphas of .86 and .89 which can classify minimal, mild, moderate, moderately severe levels having 10 items and Life Satisfaction showed good internal consistency ($\alpha = 0.74$) having 5 items which classifies Extremely satisfied, satisfied, slightly satisfied, Neutral, Slightly dissatisfied and dissatisfied levels. The administration garnered a 100% return; afterwards post survey was conducted to verify the results of the study. The gathered data were checked; tabulated, analyzed, and interpreted using frequency, percentage and the Pearson-R for the correlation of the variables

3.Result

Level of Internet Addiction of the Respondents Table 1

Score	Internet Addiction	Frequency	Percentage (%)
49 and below	Average	143	71.50
50 - 79	Problematic	55	27.50
80 - 100	Excessive	2	1.00
Total		200	100.00

As shown in Table 1, most of the respondents are average internet users suggesting that they surf the internet a bit too long sometimes but they have control over their usage. Next significant were identified as problematic, suggesting that they are

Jurnal The Messenger, Vol. ..., No. ..., January or July 20..., pp. ...-...

experiencing occasional or frequent problems because of the Internet and should consider their full impact on their lives, the least were excessive, and although they are the smallest, these respondents are having significant problems in their lives due to internet usage and should elevate the impact of the Internet in their lives and address the problems directly caused by it. Somewhat similar to Mak and colleagues (2014) who found that problematic internet usage was prevalent in Philippines in the urban areas, these suggest that problematic users are moderately present as well in rural areas, and that if not dealt with early, could lead to excessive. This is most probably due to the nature of Millennials to be engaged in what is the mark of their generation, which is the internet, also highly available in the rural areas. Moreover, it is comparable with Baht and colleagues (2015) who found out that 41.53% were found mild on internet addiction and here we have 71.5% of average users. The problematic users are found to be using the internet longer than intended that leads to neglecting of self-management and lead to the suffering of personal and social relationships. Excessive are even worse that not only personal and social relationships suffer, but they experience losing sleep and have feelings of anxiety and depression when not in access. Although in rural areas, these Millennial students have access to internet as well, thus, equal chance of exposure.

Level of Depression of the Respondents Table 2

Score	Depression	Frequency	Percentage (%)
0 - 4	Minimal	31	15.50
5 - 9	Mild	101	50.50
10 - 14	Moderate	54	27.00
15 - 19	Moderately Severe	12	6.00
20 - 27	Severe	2	1.00
Total		200	100.00

Table 2 illustrates that majority of the Millennials respondents have mild depression making up 50.50 percent of the respondents. They may not need serious treatment but should watch out for their psychological well-being. Notable also are those with severe level having the least percentage, which warrants treatment for depression, may use antidepressant, psychotherapy or a combination of both. Coinciding with the trend of Baht and Kawa's (2015) study who found out that students 42.31% were found low on depression, whereas 38.46% were found moderate and 19.23% were found severe on depression.

Level of Life Satisfaction of the Respondents **Table 3**

Score	Life Satisfaction	Frequency	Percentage (%)
10 - 14	Dissatisfied	8	4.00
15 - 19	Slightly Dissatisfied	33	16.50
20	Neutral	8	4.00
21 - 25	Slightly Satisfied	58	29.00
26 - 30	Satisfied	81	40.50
31 - 35	Extremely Satisfied	12	6.00
Total		200	100.00

Table 3 shows that most of the respondents were classified as having a satisfied life satisfaction, making up 40.50 percent of the population. It was followed by respondents stating that they are slightly satisfied as per their judgement of their lives and 33 were classified as slightly dissatisfied making up 16.50 percent of the respondents. This suggests that most fillennial students' current life situation and internalized standards are positive as per their assessment. According to Shanza and Karim (2014), life satisfaction is an overall assessment of ones' life that could range from positive or negative. Data dictates that most fillennial students have positive life satisfaction that suggest they value non-material things more than that material things and that they are more engaged socially with friend and family.

Relating Addiction, Depression and Life Satisfaction

Table 4

Depression	Internet Addiction			
	Pearson Coefficient	p-value	Decision	Remarks
	0.243	0.001	Reject Ho	Significant
Life Satisfaction	-0.012	0.866	Accept Ho	Not Significant

Note: If p value is less than or equal to the level of significance which is

0.05 reject the null hypothesis otherwise accept. Correlation coefficient values:

±0.76 – ±0.99 Very Strong; ±0.51 – ±0.75 Strong; ±0.26 – ±0.50 Moderate; ±0.11

– ±0.25 Weak; ±0.01 – ±0.10 Very Weak.

Table 4 presents the relationship between the respondents' internet addiction and level of depression. Since the value of pearson coefficient is .243 has a p-value of 0.001 the occurrence of depression has correlation, then the computed values are found to have a positively weak significance. This suggests that the more a respondent is addicted, the more the depression is present. This exhibits same results of studies of Baht and colleagues (2015), which reveals that there is a significant positive correlation ($r=.809^*$, $p < 0.001$) between internet addiction and depression among university students, indicating "further the internet addiction the depression as well, and less the internet addiction, less is the depression." Moreover with Goel, Subramanyam & Kamath (2013) as 0.7% were found to be addicts. Those with excessive use internet had high scores on anxiety and depression. Lastly, Akin and Iskanders study (2011) study which lends support to the strength of correlation in their study that upon using correlation analysis, internet addiction was found positively related to depression ($r=.67$, $p < .01$). This research shows that internet addiction

has a direct impact on depression, and that students high in internet addiction are more likely vulnerable to depression.

On relationship between the respondents' internet addiction and level of Life satisfaction, Pearson coefficient value of -0.012 has a p-value of 0.866 the occurrence of internet addiction towards life satisfaction suggests that there is no or negatively very weak correlation, then the computed values are found to be not significant, failing to reject the null hypothesis. Therefore, we can infer that internet addiction has no correlation to life satisfaction. Contrary to the results were reported in the study of Shanza and Karim (2014), Internet addiction has significant and negative impact on both life satisfaction ($B = -0.168, p < .001$) and life engagement ($B = -0.066, p < .05$). The findings also opposite those of Cao, Sun, Wan, Hao & Tao (2011), who found out that Internet Addiction was seen to also have an effect on one's life satisfaction. The study's results might be due to different living conditions of those in the rural area, as rural areas tend to be connected more physically than online and fellowship are still done the old fashioned way. Further, electric supply might also intervene in the time spent online.

4. Discussion

This study explored on the relationship of internet addiction towards depression and life satisfaction in the Philippines particularly in a State University located in a rural area. There are very few of these studies and those existing are focused on urban areas. It specifically sought to answer the level of Internet Addiction of the respondents, level of depression and level of Life Satisfaction. Moreover, the study explored the significant relationship between Internet addiction towards depression and life satisfaction. For Internet Addiction, most millennial respondents spend have average level internet addiction. This may be so as Internet has become an integral part of our way of living and although the Average users can still control their usage, cooperative efforts from school and the family will do well to monitor these Average users to prevent becoming problematic users. As for the excessive users, immediate intervention should be done as aspects of their lives are already affected by spending too much time on the internet. Though few in numbers, this shows that extreme cases are existing even in rural areas prompting the University to look into policies on internet use. As for the level of Depression, although respondents with mild depression may not need serious treatment, they should watch out for their psychological well-being. And those severe cases needs treatment immediately and should be seen as a specialist. Having these data, the University should revisit its policy in promoting a conducive environment and teaching strategies involving the use of internet as respondents with mild depression might worsen and that

the University should be capable to at least provide mental first aid for those with severe level depression and have linkages for specialist capable of address these concerns for referrals. For their level of Life Satisfaction, most millennial students' current life situation and internalized standards are satisfied as per their assessment. But some are dissatisfied. Results provide further exploration on the areas of life satisfaction as the University can identify which aspects or ways could be continued leading to increased life satisfaction, and those contributing to dissatisfaction could be improved. For the relationship between Internet Addiction and Life satisfaction, results show having a positively weak relationship, this suggests that the more the respondent has internet addiction, the more the depression. Having established this results, it is pertinent to regulate the use and proper utilization of the internet as a tool for learning and socializing. Too much and unguided use risk the user not just to addiction, but depression as well, that when untreated might lead to severe psychological disorders. Lastly, there is no or negatively very weak relationship between internet addiction and life satisfaction. Results might be due to different living conditions of those in the rural area, as rural areas tend to be connected more physically than online and fellowship are still done the old fashioned way. Further, electric supply might also intervene in the time spent online.

5. Conclusion

Based on the findings, the researcher arrived at the following conclusions; Most of respondents were classified as average level users with internet addiction while some were problematic level users. Half of the respondents were subject to mild depression while others were identified as undergoing moderate depression. Most of the respondents are satisfied with their lives but least are dissatisfied. Finally, there was an evident positive significant relationship between internet addiction and depression and there is no or negatively weak relationship between internet addiction and life satisfaction.

Therefore it is recommended to raise awareness of internet use towards students as this could greatly affect their personal relationships and academic performance. Parents, teachers, and counselor should work hand-in-hand to properly use of internet to prevent problems in the future. Proper regulation on the part of parents

especially should be practiced. Internet providers should also come up with regulations and parameters based on users' profile to prevent exposure to undesirable and sensitive content for certain

demographics without suppressing learning experience. Inculcating the proper use of internet and monitor time usage could be done. Those identified with internet addiction and depression should be encouraged to avail of counseling and psychological services of the university, as contents seen in the virtual world could cause confusion and sway students from the right path of development. Philippine government should look into similar cases for prevention and use as basis for crafting policies or laws for the right use of Internet. Lastly, respondents can continue with the overall life style that contribute to satisfaction, and work on those areas that need to be improved to promote a better life satisfaction lessening negativity and undesired possible effects of the web.

6. Conflict of Interest

I certify that there is no conflict of interest with any financial, personal, or other relationships with other people or organization related to the material discussed in the manuscript.

7. Acknowledgements

The author would like to warmly express his gratitude and acknowledgement to all individuals who have made the conduct of the study possible. He is indebted to all researchers and scholars whose works were cited herein. Likewise, he would like to express his gratitude to the developers of the research instrument, especially the International Society of Internet Addiction. To the institutions who permitted data collection, the mentors and colleague for the support and to his Family and Wife.

References

- Ardales B.V(2008). Basic Concepts and methods in Research. Educational Publishing House
- Feist J. and Feist G. (2009). Theories of Personality, 7th Edition.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2009) Multivariate Data Analysis (7th Edition) New Jersey: Prentice-Hall, Inc.
- Kothari, C.R (2004) Research Methodology: Methods and Technique New Age International (p) Limited, Publishers.
- Jurnal The Messenger, Vol. ..., No. ..., January or July 20..., pp. ...-...
- Neukrug, E. (2014). Counseling Theory and Practice, 1st Edition.
- Journals and Monographs
- Akin, A. & Iskander, M., (2011). Internet Addiction and Depression, Anxiety and Stress. International Online Journal of Educational Sciences. 3(1), 138-148
- Baht, S. & Kawa, H. (2015). A Study of Internet Addiction and Depression among University Students. Int J Behav Res Psychol, 3(4), 105-108.
- Bastani, S. (2008). Gender Division in Computer and Internet Application: Investigation of the Students of Tehran Universities. Women Studies, 5, 45-64.
- Block, J. J. (2008). Issues for DSM-V: Internet addiction. American Journal of Psychiatry, 165, 306–307.
- Bringula, R., Bonifacio, J., Natanauna, A., Manuel M., & Panganiban, K. (2012). Pattern of Internet Usage in Cyber Cafes in Manila: An Exploratory Study. International Journal of Cyber Society and Education. 5 (2) 149-162
- Burnay, J., Billieux, J., Blairy, S. & Larøi, F. (2015). Which psychological factors influence Internet addiction? Evidence through an integrative model Computers in Human Behavior. 43 28–34
- Cao, H., Sun, Y., Wan, Y., Hao, J., & Tao, F. (2011). Problematic Internet use in Chinese adolescents and its relation to psychosomatic symptoms and life satisfaction. BMC Public Health 10.1186/1471-2458-11-802
- Datu, J. A., Valdez, J. P. & Datu, N. (2012). Does Facebooking make us sad? Hunting relationship between Facebook use and depression among Filipino adolescents. International Journal of Research Studies in Educational Technology 1 (2) 83-91
- Gentile, D. A., Choo, H., Liau, A., Sim, T., Li, D., Fung, D., et al. (2011). Pathological video game use among youths: A two-year longitudinal study. Pediatrics, 127, 319-329.
- Kuss, D. J., Griffiths, M. D., Karila, L., & Billieux, J. (2014). Internet addiction: A literature review of epidemiological research for the last decade. Current Pharmaceutical Design, 20, 4026–4052.
- Mak, K, Lai, C., Watanabe H., Kim, D., Bahar, N., Ramos M., Young, K., Ho, R.,
Title of Paper ... (First Author)
2810
- Aum, N. & Cheng, C. (2014). Epidemiology of Internet Behaviors and Addiction Among Adolescents in Six Asian Countries. CYBERPSYCHOLOGY, BEHAVIOR, AND SOCIAL NETWORKING. 17 (11)

- Sahin, C. (2016). Examination of the Relationship between Life Satisfaction Level and Internet Addiction of the Students in Guidance and Psychological Counseling Department. *International Journal of Contemporary Educational Studies* 2 (1) 2548-9373
- Shanaz, I & Karim, A. (2014). The Impact of Internet Addiction on Life Satisfaction and Life Engagement in Young Adults. *Universal Journal of Psychology* 2(9): 273-284
- Simek, E. & Sali, J (2014), The Role of Internet Addiction and Social Media Membership on University Students' Psychological Capital *CONTEMPORARY EDUCATIONAL TECHNOLOGY*, 2014, 5(3), 239-256
- Subramaniam, M., Shijia, Q. and M. Winslow, 2008. Prevalence and correlates of Excessive internet use among youth in Singapore. *Annals Academy of Medicine*, 37(1): 10 -14.
- Zainudin, A., Din, M., & Othman M. (2013). IMPACTS DUE TO INTERNET ADDICTION AMONG MALAYSIAN UNIVERSITY STUDENTS. *International Journal of Asian Social Science*, 3(9):1922-192
- Theses/Dissertations
- Cardak, M., Mustafa, C., & Colak, T. (2009). The Effect of a Rational Emotional Behavior Therapy (REBT) Group Counseling Program on the Internet Addiction among University Students
- Hechanova, M. R & Go, R. (2014). The Good, The Bad and The Ugly: Internet Use, Outcomes and the role of Regulation in the Philippines.
- De Argaez, E., (2012). Internet World Stats. <http://www.Internetworldstats.com/> consulté le 09 avril 2012.
- Frangos, C. C., Frangos, C. C., & Sotiropoulos, I. (2011). Problematic Internet Use among Greek University Students: An Ordinal Logistic Regression with Risk Factors' Negative Psychological Beliefs, Pornographic Sites and Online Games. *CyberPsychology, Behavior and Social Networking*: <http://www.liebertonline.com>
- Jurnal The Messenger*, Vol. ..., No. ..., January or July 20..., pp. ...-...
- Gultiano, S., King, E., Orbeta, A., & Gordoncillo, P. (2010). Internet Use among Filipino Public High School Students
- Goel, D., Subramanyam, A. & Kamath, R. (2013). A study on the prevalence of Internet addiction and its association with psychopathology in Indian adolescents
- Hechanova, R. & Czincz, J. (2009). Internet Addiction: Debating the Diagnosis.
- Jelenchick, L. A., Eickhoff, J. C., & Moreno, M. A. (in press). Facebook depression? Social networking site use and depression in older adolescents. *Journal of Adolescent Health*.
- Khan, R., Salim, M., Bilal, M., Hussain, A., & Hasseb, M. (2014). The Relationship between Internet Addiction and Anxiety among students of University of Sargodha
- Kuss, D. J., Shorter, G. W., van Rooij, A. J., Griffiths, M. D., & Schoenmakers, T. (2013). Assessing Internet addiction using the parsimonious Internet addiction components model. A preliminary study.
- Lissita, S. & Bolotin S. (2014). Life satisfaction in the internet age e Changes in the past decade.
- Pangan, J. E. (2008). Level up!, But I got to Log In!, Net Love; a collection of three shortscreencplays on computer and internet addiction.
- Tokunaga, R. (2015). Perspective on Internet Addiction, Problematic Internet Use and Deficient Self-regulation
- Waldo, A (2014). Correlates of Internet Addiction among Adolescents. Whisman, Jessica (2015). A Comparative Analysis of Internet Addiction and Substance Abuse in Adolescents
- Abuse in Adolescents Valiputhenpurayil, M. J. (2005). Internet Addiction Among College Students
- Electronic Sources
- Addictionrecov.org (2017). What is internet Addiction? <http://www.addictionrecov.org/Addictions/index.aspx?AID=43>
- Abs-cbn.com (2011). How many teens have internet addiction? <http://news.abs-cbn.com/lifestyle/05/20/11/how-many-teens-have-internet-addiction>
- Title of Paper ... (First Author)
2810
- Rappler.com (2016). Profile internet users ph <http://www.rappler.com/brandrap/profile-internet-users-ph>
- Ncbi.nlm.nih.gov (2014).Internet addiction disorder and youth <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4303443/>
- Philstar.com (2016). Internet Addiction <http://www.philstar.com/cebu-lifestyle/2016/04/13/1572423/internet-addiction>
- Malaya.com (2015). Internet addiction health concern <http://www.malaya.com.ph/business-news/business/internet-addiction-health-concern>
- lifestyle.inquirer.net* (2011). Screen life <http://lifestyle.inquirer.net/2111/screen-life/>
-

huffingtonpost.com (2017).Philippines: A Digital Lifestyle Capital in the Making?

http://www.huffingtonpost.com/jonha-revesencio/philippines-a-digital-lif_1_b_7199924.html

generationy20.com (2017): Uniquely Generation Z <https://www.generationy20.com/retail-generation-z.PDF>