



COLLEGE READINESS AND ADJUSTMENT OF FILIPINO K-12 GRADUATES: A FOCUS ON PERSONS WITH DISABILITIES

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ABSTRACT

This study attempted to fill in the gaps on the dearth of literature exploring the college readiness and adjustment of PWD K-12 graduates as they transition from basic to tertiary education. These two constructs were measured using the College Readiness Test (CRT) and the College Adjustment Scales (CAS) test. The data were obtained from 74 PWD in a public university in Northern Philippines. The employment of the descriptive correlation design revealed that most of the respondents were college unready. However, they manifested favorable adjustment to developmental and psychological problems except for depression and suicidal ideation. With the use of Kendall's tau-b analysis, the results show that PWD K-12 graduates who are more college ready tend to adjust better regarding substance abuse (the use of drugs, alcohol, inhalants, and solvents). Thus, it is highly recommended that college readiness be enhanced in basic education because it is a critical factor in the college adjustment of students with disabilities. Higher education institutions (HEIs) also need to craft and implement specific interventions, with a focus on depression management, to address the high depression and suicidal ideation among PWD students as they are cardinal signals of maladjustment that may lead to serious behavioral problems.

Contribution/Originality: The study is one of the first attempts to document the college readiness and college adjustment of PWD K-12 graduates in the Philippines. It provides education policymakers with viable insights for carrying out interventions that may enhance the college readiness and adjustment of PWD, ensuring their seamless transition from basic to tertiary education.

1. INTRODUCTION

Since education is a fundamental human right, the expanding principle of inclusivity has become a significant component in the Education 2030 Framework for Action and the Sustainable Development Goal Four (SDG 4) on

quality education. This model emerged as a fitting response to the “no child left behind” context (Kirschner, 2015). Integral to this is the inclusion of students with disabilities in schools. There is a clear-cut focus on meeting the various educational needs and opportunities of all students regardless of their socio-economic status, religious-cultural background, and physical and medical conditions (Sanagi, 2016).

In 2006, the United Nations Convention on Rights of Persons with Disabilities (UNCRPD) comprehensively described persons with disabilities as people with long-term physical, sensory, intellectual, or mental impairments that on interface with numerous barriers may impede their full and valuable participation in society on an equal basis with other individuals (Australian Human Rights Commission, 2012). In the Philippines, Republic Act Number 7277, also known as the “Magna Carta for Disabled Persons”, provides seven classifications of disabilities: visual disability, chronic illness, psychosocial disability, learning disability, mental disability, orthopedic disability, and communication disability (Levosada, 2017). Put simply, PWD constitute a marginalized sector of society whose vulnerability and special needs require proper protection and concrete action.

In a 2013 census, it was found that there were 1.4 million Filipinos considered as PWD. Specifically, individuals aged 15–19 years old constituted the highest percentage (Philippine Statistics Authority, 2013). The data only imply that several PWD of school age need academic attention and assistance in terms of educational scenario. Previous studies have noted that these students registered a high drop-out rate (Agbon & Mina, 2017; Reyes, 2015) and only a few of them reached college and eventually graduated (Yap, Reyes, Albert, & Tabuga, 2009). Considering these issues, it is crucial to explore where PWD are currently positioned regarding their transition from basic to tertiary education.

Undoubtedly, the transition from high school to college entails stress (Herridge, 2017) as the new educational landscape engenders the relearning of vital social and psychological dimensions concerning the new norms of college life and the impending academic, personal, and social demands (Iglesias-Benavides, Blum-Valenzuela, Lopez-Tovar, Espinosa-Galindo, & Rivas-Estilla, 2017). The foregoing context, therefore, leads to the exploration of college readiness and college adjustment. As an evolving educational construct, college readiness refers to the potential of a student to be admitted to college and complete entry-level courses without remediation (Conley, 2014). With this, a college-ready student has both the mindset and disposition to understand and hurdle the academic standards, culture, and structure of postsecondary education that maximize the college experience. College adjustment, however, involves learning and internalizing the character, climate, and behavioral norms of the educational environment (Prasad, 2017). As a result, students who are psychologically adjusted become successful in their adaptation to college (Iglesias-Benavides et al., 2017) and can gain meaningful academic experience.

With the recent graduation of the first batch of the Philippine K-12 program in 2018, a considerable number of students were admitted to college; however, little is known about college readiness and adjustment among graduates with disabilities. The insufficiency of information presents a narrow grasp of the college experiences of students with disabilities. The input of the current study hopes to establish a reasonable ground for educational policymakers to craft evidence-based interventions ensuring the seamless transition of students with disabilities from basic to tertiary education.

Hence, this preliminary study, as relatively novel, came into fruition with the following objectives: (a) determine the college readiness of the K-12 graduates with disabilities, (b) ascertain the level of the college adjustment of the K-12 graduates with disabilities, and, (c) examine the relationship between college readiness and college adjustment of the K-12 graduates with disabilities. In the long run, this study hopes to contribute significantly to the crafting of institutional reforms that are inclusive, relevant, and PWD-responsive with emphasis on the tenets of the Gender and Development (GAD) approach in the Philippine educational milieu.

2. LITERATURE REVIEW

2.1. School Participation of PWD

The school participation of PWD has been a concern that few studies have attempted to unravel. In the basic education context, the research of [Agbon and Mina \(2017\)](#) found that some Filipino PWD of school age were not able to go to school because of a lack of finances and access to educational facilities. Meanwhile, [Reyes \(2015\)](#) reported that due to some PWD-unfriendly infrastructures (e.g., transport system, school buildings), students with disabilities experience challenges in school that leads them to drop out. As noted by previous researchers, the most common reason for the low school participation rate of students with disabilities is the prejudice that they encounter. Consequently, students with disabilities are less likely to attend structured and unstructured academic activities, and they most likely feel reduced interaction ([Maciver et al., 2018](#); [Maciver et al., 2019](#)).

In tertiary education, students with disabilities are increasing in number ([Biggeri, Diego, & Bellacicco, 2020](#); [Yssel, Pak, & Beilke, 2016](#)). They have shown appreciation for the benefit of having a college degree to secure better employment opportunities and a higher social status. However, as identified by [Wasielewski \(2016\)](#), PWD in college face more impediments than their non-disabled counterparts. Their special needs and conditions usually slow them down in terms of performance, with their significant challenges attributed to curriculum, instruction, and assessment ([Nel, Rankoana, Govender, Mothibi, & Moloantoa, 2015](#)). It is not surprising that in a Philippine study, previous researchers ([Yssel et al., 2016](#)) have documented that only one in four PWD has reached college or eventually completed a degree. This point shows that, indeed, critical issues concerning a PWD's college experience need immediate attention.

2.2. College Readiness of PWD

[Conley \(2014\)](#) argued that college readiness constitutes multifaceted aspects crisscrossing with one another, such as academic behaviors, cognitive strategies, content knowledge, and coping skills. Hence, ensuring students' readiness to college poses a major challenge because of the required academic rigors and support needed for students to succeed in their college life. This claim holds true of PWD since it has been documented that transitioning from high school to college is stressful ([Herridge, 2017](#)).

Nonetheless, there is a paucity of studies featuring the college readiness of PWD. In the study of [McGregor et al. \(2016\)](#), it was found that university students with disabilities experienced more difficulties meeting their requirements and encountered more impediments caused by non-academic tasks than their counterparts. Consequently, they struggled with their college experience. A previous study has also noted that students with disabilities who cannot demonstrate acceptable academic accommodations may begin to experience difficulties resulting in low academic performance ([Wasielewski, 2016](#)), which may adversely affect their college readiness.

2.3. College Adjustment of PWD

Entry to college certainly demands an adjustment for all students ([Prasad, 2017](#)) irrespective of their physical circumstance, with or without disabilities ([Lipka et al., 2020](#)). This experience exposes students to an array of diverse challenges involving scholastic, individual, and societal responsibilities ([Arjanggi & Kusumaningsih, 2016](#)). Generally, PWD need to exert more effort in attending to some distinct concerns because of the added indispositions caused by their disabilities ([Herridge, 2017](#)). Thus, they are consequently impeded in fulfilling their tasks and their psychosocial adjustments as they transition to a new educational environment ([Kimball, Wells, Ostiguy, Manly, & Lauterbach, 2016](#); [Tansey et al., 2017](#)).

Moreover, the literature reveals that the college adjustment experience of students with disabilities differs to that of students without disabilities ([Fleming, Plotner, & Oertle, 2017](#)). Previous researchers have noted that PWD usually experience high psychological discomfort and dissatisfaction with life, a feeling of divergence, and shame from people around them ([Smedema et al., 2015](#)) as well as a poor sense of academic self-concept and self-worth

(Seyed, Salmani, Motahari Nezhad, & Noruzi, 2017). However, a more distinctive report by Prasad (2017) about the adjustment of PWD using the CAS test, the same measure utilized in the present study, found that they struggle with anxiety, depression, suicidal ideation, and career and interpersonal problems.

2.4. Conceptual Framework

Contextually, PWD referred to the first-year college students whose self-reported disabilities were generally based on prior medical diagnosis. The basis of their classification was the Republic Act Number 7277 that includes chronic illness as well as visual, communication, orthopedic, learning, mental, and psychosocial disabilities. Since little is known regarding the transition of PWD K-12 graduates from basic to tertiary education, this study attempted to fill in gaps in the literature by exploring their college readiness and adjustment. In this study, college readiness is understood as the ability of K-12 graduates to be admitted to college and to pass the foundation courses successfully without remediation. Hence, the result of the College Readiness Test was used as the main index of readiness since it was anchored on the content and performance standards of the Philippine College Readiness Standards (CRS). However, college adjustment refers to the PWD's ability to cope with the various problem areas in tertiary education. Specifically, the College Adjustment Scales (Anton & Reed, 1991) was used to comprehensively diagnose developmental and psychological problems that may be encountered by the PWD: academic problems (AP), anxiety (AN), career problems (CP), depression (DP), family problems (FP), interpersonal problems (IP), self-esteem problems (SE), substance abuse (SA), and suicidal ideation (SI). With this conceptual framework, the study hypothesized that the college readiness of PWD tends to influence their college adjustment to the nine problem areas, as shown in CAS. Hence, the study paradigm below, Figure 1, presents college readiness as the independent variable, while the problem areas serve as the dependent variables.

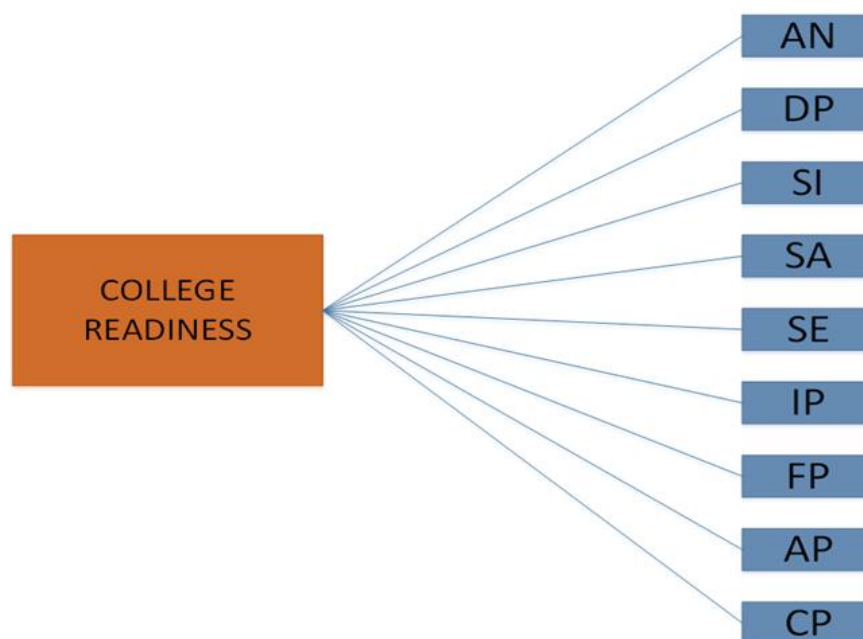


Figure-1. Conceptual framework of the study.

3. METHODOLOGY

3.1. Research Design

The study employed a descriptive correlational design as it examined the interplay of the college readiness and college adjustment of Filipino K-12 graduates with disabilities. According to Taskiran and Baykal (2019) descriptive correlational research is used to determine the extent of coexistence between variables. Essentially, it identifies the patterns in data but does not prove any causal effect (Omair, 2015).

3.2. Respondents

Out of the 8,601 first-year students enrolled for the School Year (SY) 2019–2020 in the respondent university, there were 74 or 0.86% self-reported PWD, generally based on prior medical diagnosis. All of them were chosen as study respondents. In terms of the profile, there were 48 (64.86%) females and 26 (35.13%) males with the mean age of 18.73. Thirteen respondents (17.56%) resided in urban areas, whereas 61 (82.43%) lived in rural areas. Regarding the college program classification, 35 (47.30%) were enrolled in science, technology, engineering, and mathematics (STEM), 21 (28.37) chose programs in humanities and social sciences (HUMSS), 10 (13.51%) went with accountancy, business, and management (ABM) programs, four (5.40%) were enrolled in technical–vocational programs, and four (13.51%) were admitted to the sports program.

Table-1. Demographic profile of the respondents.

Variable	Frequency	Percent (%)
Sex		
Male	26	35.13
Female	48	64.86
Mean Age = 18.73		
Residence		
Urban	13	17.56
Rural	61	82.43
College Program Classification		
STEM	35	47.30
HUMSS	21	28.37
ABM	10	13.51
Technical–Vocational	4	5.40
Sports	4	5.40

As to the type of disability, there were 33 (44.59%) respondents with an orthopedic disability (e.g., scoliosis, fractured legs) and 31 (41.89%) respondents with a visual disability (e.g. poor vision). Only six (8.11%) of the respondents had a communication disability (e.g., a partial hearing impairment), while four (5.41%) had a chronic illness (e.g., lymphoma, heart disease). Among the respondents, no one had mental, psychosocial, or learning disabilities.

Table-2. Respondents based on types of disability.

Types of Disability	Frequency	Percent (%)
Chronic Illness	4	5.41
Orthopedic Disability	33	44.59
Visual Disability	31	41.89
Communication Disability	6	8.11
Total	74	100

3.3. Study Locale

The study was conducted in a public university in Northern Philippines. This institution of higher learning has eight campuses strategically located in the province. Being a comprehensive university, it offers diverse academic programs corresponding to the tracks and strands of the K-12 program. With its mandate on instruction, research, extension, and production, the university established its niche programs in agriculture, fishery, industrial technology, engineering, public health, teacher education, and accountancy.

3.4. Research Instruments

In addressing the research objectives, two tests were used in obtaining the quantitative data. These were the CRT and CAS. The CRT developed by the Project Research Team of the Discovery and Applied Research and Extension Trans/interdisciplinary Opportunities (DARE TO) Research Grant was utilized in determining the

college readiness of the PWD K-12 graduates. It is a 200-item criterion-referenced test measuring college readiness in the seven core learning areas in the CRS, namely, English, Filipino, Literature, Mathematics, Science, Social Studies, and Humanities. The psychometric properties of the CRT are as follows: a difficulty index of 65.64, discrimination index of 0.22, distractor efficiency of 68.91%, and inter-item consistency of $r=0.796$. Also, it has the qualities of being contextualized and gender-fair (Tamayao et al., 2020).

Moreover, the CAS developed by Anton and Reed (1991) was employed in gauging the level of adjustment of PWD K-12 graduates regarding the developmental and psychological problems, namely, academic problems, anxiety, career problems, depression, family problems, interpersonal problems, self-esteem problems, substance abuse, and suicidal ideation. This standardized measure has 108 items for each scale or problem area, consisting of 12 questions. The minimum score is 12, while the maximum score is 48. The CAS scales possess internal consistency ranging from 0.80 to 0.92, with an overall mean of 0.86. It has both discriminant and convergent validity, as supported by four studies that used multitrait-monomethod research designs (Wimmer, 2008).

3.5. Data Analysis

Descriptive statistics such as frequency and percentage were employed to ascertain the college readiness and level of college adjustment of the PWD students. In terms of college readiness, students who obtained at least 100 correct responses from the 200 items in the CRT are considered college ready. In contrast, those who obtained below 100 are considered college unready. In terms of the levels of college adjustment, the nine problem areas were determined using the following scale interpretation:

Table-3. Interpretation of the CAS T-Score.

Range of T-scores	Interpretation
Greater than or equal to 70	Poor adjustment
60–69	Fair adjustment (Borderline)
50–59	Good adjustment
20–49	Excellent adjustment

Source: Anton and Reed (1991).

Moreover, correlation analysis was used to determine the association between college readiness and the nine problem areas in CAS. Specifically, Kendall's tau-b was used since the bivariate normality distribution of the variables was not met. The analysis was tested at 0.05 level of significance.

3.6. Ethical Considerations

The ethical standards were deliberately complied with when doing the research, especially important since the study respondents were PWD. As part of the protocol, permission was sought from the respective university officials and the free and prior informed consent (FPIC) of each of the student respondents was obtained. To safeguard the credibility of the data, the researchers strictly followed the guidelines in test administration, checking, and scoring with the technical assistance of eight registered guidance counselors and eight psychometricians.

4. RESULTS

4.1. College Readiness of the PWD K-12 Graduates

Figure 2 shows that, overall, most of the respondents were college unready. Out of the 74 PWD K-12 graduates, only 33.79% had displayed mastery of the content and performance standards defined in the CRS. Notably, among the 31 respondents with a visual disability and the 33 respondents with an orthopedic disability, there were only 41.93% and 30.30% considered college-ready, respectively. The same trend could be seen among respondents with communication disabilities and chronic illness in which only 16.67% and 25% were college ready, correspondingly.

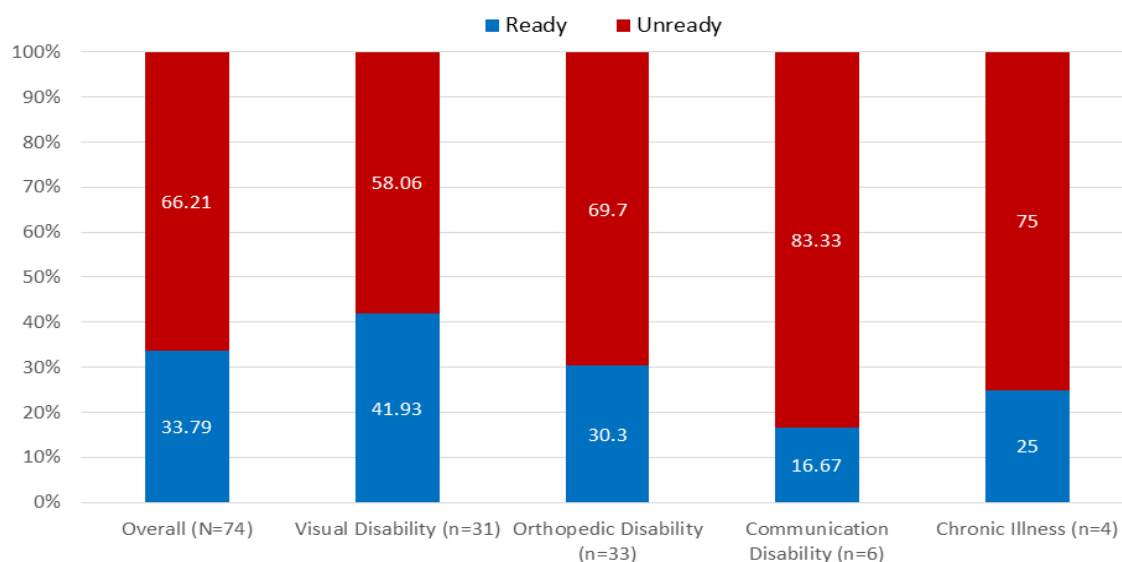


Figure-2. Graph Showing the Percentage of College Ready and College Unready PWD K-12 Graduates.

4.2. College Adjustment of the PWD K-12 Graduates

Table-4. Distribution of respondents along with their levels in the college adjustment scales.

College Adjustment Scales	Levels of Adjustment (N=74)							
	Poor		Fair		Good		Excellent	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Academic Problem (AP)	3	4.1	6	8.1	35	47.3	30	40.5
Anxiety (AN)	2	2.7	17	23.0	45	60.8	10	13.5
Interpersonal Problem (IP)	4	5.4	20	27.0	36	48.6	14	18.9
Depression (DP)	5	6.8	33	44.6	29	39.2	7	9.5
Career Problem (CP)	1	1.4	21	28.4	40	54.1	12	16.2
Suicidal Ideation (SI)	7	9.5	38	51.4	23	31.1	6	8.1
Substance Abuse (SA)	0	0	4	5.4	28	37.8	42	56.8
Self-esteem (SE)	4	5.4	13	17.6	46	62.2	11	14.9
Family Problem (FP)	0	0	18	24.3	47	63.5	9	12.2

Table 4 presents that among the nine developmental and psychological problem areas as revealed by the CAS, a higher proportion of the respondents had favorable adjustments on the seven problem areas, namely, substance abuse, academic problems, self-esteem, anxiety, interpersonal problems, career problems, and family problems, which is interesting to note. The finding simply implies that the K-12 graduates with disabilities are more likely to cope with irritability and aggression (SA), poor study skills, and test anxiety (AP), as well as excessive sensitivity to criticism and lack of confidence (SE). Also, they tend to adjust well to any extreme fear or worries and sense of impending danger (AN), undue dependence and distrustful style of relating to others (IP), and difficulty with setting career goals (CP), as well as emotional separation and lack of support from family (FP).

Nonetheless, 44.6% of the respondents had a fair or borderline adjustment, and 6.8% showed poor adjustment to depression (DP). This result means that most of them are likely to experience chronic fatigue and loss of interest in typically gratifying activities. Repeatedly, they may experience feelings of melancholy and desperateness that drive them to social withdrawal from their classmates and peers. Considerably, the majority of the PWD K-12 graduates displayed fair (51.4%) and poor (9.5%) adjustment to suicidal ideation (SI). This finding indicates their

strong tendency to entertain thoughts of suicide as the most viable way to end their problems. Chances are, they have formulated suicide plans or even attempted to commit suicide in the past.

By and large, DP is a precedence of SI (Mustaffa, Aziz, Mahmood, & Shuib, 2014). Thus, this finding presents a higher intensity in terms of comorbidity. The borderline and poor score ranges concerning these problem areas imply the need for monitoring and supervision and, if possible, follow-up assessment to ensure the respondents' psychological well-being.

4.3. Relationship between College Readiness and College Adjustment of the PWD K-12 Graduates

Table-5. Correlation results between college readiness and college adjustment.

College Adjustment Scales	College Readiness Test	
	Correlation Coefficient	P-value
AP	.074	.363
AN	.043	.603
IP	-.064	.434
DP	.037	.646
CP	-.118	.152
SI	-.092	.265
SA	-.183*	.031
SE	.068	.404
FP	-.047	.565

Note: *Significant at 0.05.

The results of Kendall's tau-b correlation showed that there is a significant association between college readiness and substance abuse ($\tau_b = -0.183$, $p = .031$). This finding means that the more college ready the PWD K-12 graduates are, the better adjusted they are regarding their tendency to encounter complications in their interpersonal, social, academic, and vocational functioning as a result of substance abuse. In other words, the respondents' college readiness influences their ability to not succumb to substance abuse. Conversely, the other adjustment scales are not significantly associated with college readiness.

5. DISCUSSION

The present study reveals that the majority of Filipino K-12 graduates with disabilities are college unready. This insight affirms previous studies (Adreon & Durocher, 2007; Kim, 2016; McGregor et al., 2016; Wasielewski, 2016) claiming that students with disabilities struggle with the attainment of readiness competencies in college that can be ascribed to their limited school participation (Maciver et al., 2018). Considering their current physical conditions, these students are likely to have reduced attendance, limited interactions, and lack of engagement in an expansive school setting, which in effect, might have impeded their mastery of the K-12 program competencies as well as the CRS. As asserted by Kim (2016), the following areas need serious attention to ensure the college readiness of PWD: (1) congruity between a current disability and the institution's educational setting, (2) keeping up with the K-12 assessment, and (3) passing the college entrance examinations.

Akin to the findings of Prasad (2017), the present study shows that PWD experience depression and suicidal ideation. These two problem areas are prevalent in most universities' public health issues (Mackenzie et al., 2011) and they are significantly correlated (Mustaffa et al., 2014). According to Lewis et al. (2017) there is proof of a direct relation between disability and depression and also between disability and suicidal ideation. Depression among people with disabilities is linked to their life events (Tough, Siegrist, & Fekete, 2017). These include leaving their homes to pursue college, searching for their identity, learning new skills, missing shared support systems, and augmented time exigencies (Dyson & Renk, 2006). The risk of suicidal ideation, on the other hand, could be ascribed to PWD' feelings of oppression and seclusion due to their disability (Russell, Turner, & Joiner, 2009). Being in this kind of condition suggests the need for immediate educational intervention, psychological assessment, and follow-up (Milsom & Dietz, 2009). Remarkably, the present study claims that a significant correlation between

college readiness and college adjustment regarding substance abuse exists. This point indicates that PWD who are more college ready tend to deal better with matters concerning substance abuse. Though no existing literature directly discusses how college readiness influences adjustment to substance abuse, the finding could be implicitly explained by two perspectives. First, the PWD who are college ready do not see their disability as a reason to succumb to substance abuse. Their mastery of competencies, as defined in the CRS, operates as their vital protective factor in positively responding to nuisances in educational, occupational, and relational behaviors as a consequence of substance abuse (Anton & Reed, 1991). In other words, their being college ready serves as a valuable psychological resource for their tendency to veer away from substance abuse. Second, for the college unready students, the sequential stress theory (Hagan & Foster, 2003) may explain how they are more likely to accede to some delinquent actions like substance use. Their case of having some physical incapacities and inferior academic proficiency, adding to their expected adaptation in their transition to college, would build up as an underlying pattern of maladjustment (Cohen, Gianaros, & Manuck, 2016). This experience yields in them a sense of guilt surrounding the misconduct while misusing drugs or alcohol. In simple terms, the inclination of the college unready PWD to engage in substance use is attributed to the aggregate effect of their disadvantaged conditions (Hussong, Hicks, Levy, & Curran, 2001).

6. CONCLUSION AND RECOMMENDATION

This study shows that Filipino K-12 graduates with disabilities are college unready. However, they manifest favorable adjustment to the developmental and psychological problems except for depression and suicidal ideation. As there is a positive correlation between college readiness and college adjustment on substance use, a higher college readiness acts as a restrictive factor for the PWD K-12 graduates to indulge in the use of drugs, alcohol, inhalants, and/or solvents. Considering that college readiness is a cognitive construct, it makes students with disabilities become more rational, logical, and discriminating in their choices; hence, they tend to cope better with difficulties in interpersonal, social, and academic functioning as a result of substance use and abuse. Given the foregoing result, it is highly recommended that basic education institutions need to enhance the college readiness of students under their tutelage because it plays as a critical factor in the college adjustment of PWD. Moreover, HEIs need to craft and implement specific interventions with a focus on depression management to address the high depression and suicidal ideation among PWD students as they are cardinal signals of maladjustment that may lead to serious behavioral problems.

7. LIMITATIONS AND FORWARD STUDY

In the present study, only the K-12 graduates with visual, orthopedic, and communication disabilities, as well as chronic illness, were considered. In context, the understanding of college readiness was limited to the respondents' performance in the CRT. In contrast, the concept of the college adjustment was construed as the ability of the K-12 graduates with disabilities to cope with the problem areas as revealed by the CAS. Furthermore, the study data were obtained only from the PWD first-year college students at a public university in the Philippines. Despite its limitations, this study is the first in the Philippine context to provide viable insights into college readiness and adjustment of PWD. Interestingly, future studies may consider other cognitive (e.g., intelligence quotient) and non-cognitive (e.g., grit, self-concept) variables in examining the transition experiences of PWD from basic to tertiary education, with the inclusion of the target respondents from private HEIs and other geographical regions.

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