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Patubas is a Hiligaynon word for "product" or "fruit". It is a fitting description for this multidisciplinary research journal which is indeed, a product or fruit of labors of research "seekers" of truth in its varied dimensions.

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TABLE OF CONTENTS

PERCEPTIONS OF THE APPLICATIONS OF LEADERSHIP STYLES ACROSS SUB-SAHARAN AFRICA

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ABSTRACT

Although some observers have argued that leadership has improved in Africa, since the end of colonial times, others have suggested that leadership problems have remained the root causes of Africa's multifaceted challenges (Adadevoh, 2006; Musekura & Ntamushobora, 2004). Still, others have suggested that any continued leadership problems might actually stem from less than adequate programs in African higher education that have limited the number and types of quality outputs (Haruna, 2009). This has resulted in a subsequent call for university-industry interactions and quality involvement in program development and education management throughout the continent. Based on these, we evaluated the perception of African stakeholders, from 11 different countries, regarding organizational applications, by leaders, of Servant Leadership (Winston & Fields, 2015), Leader Member Exchange (Graen & Uhl-Bien, 1995), Contingent Reward Leadership (Reitz, 1971), and Autocratic Leadership Style (Lewin, Lippit &White, 1939). We found that perceptions of students and professionals differ, regarding servant leadership and autocratic leadership. We also evaluated the perceptions of stakeholders, regarding the quantity and quality of professionals' general involvement with universities and in teaching and educational development of university students. In these areas, we found that perceptions

of students and professionals differ, regarding professionals' general involvement with universities.

Key Words: African Leadership, African Management, Servant Leadership, LMX, Contingent Reward, Autocratic Leadership

Perceptions of the Applications of Leadership Styles across Africa

The continent of Africa reflects paradox (Adeyemo, 2009; Mamiru, 2012). It has received blessings that include thousands of lakes and rivers, large amount of mineral resources, a variety of domestic and wild animals, year-round sunshine, and other favorable weather conditions, along with vast amounts of fertile and arable lands (Chazan, Peter, Robert, Donald, & John, 1999; Meredith, 2006; Wangari, 2009). Yet, what has come to the minds of some people, when the word "… Africa is mentioned, is struggle, poverty, under-development, socio-political instability, third world, dark continent, and HIV/AIDS…" (Bilong, 2008, p. 16). Indeed, many African people live in abject poverty (Kiruhi, 2013), unbearable sufferings (Bilong, 2008), enormous pains (Tutu, 1999), and unexplainable brokenness (Chazan et al., 1999), when compared to many other parts of the world.

Some theorists and researchers have argued that the abundance of challenges facing Africans would not exist if only leaders would have applied responsible leadership on the continent (Adadevoh, 2006; Adeyemo, 2009; Kiruhi, 2013; Mamiru, 2012). While some have argued that the behaviors of African leaders, derived from their indigenous cultural values, have served to overcome negative outcomes (Wanasika, Howell, Littrell, & Dorfman, 2011), others have proposed that leadership problems remain the root causes of Africa's multifaceted challenges (Adadevoh, 2006; Musekura & Ntamushobora, 2004); and that these causes have resulted from negative leadership values such as selfishness, greediness, nepotism, tribalism, corruption, embezzlement, favoritism, insecurity, hatred, wickedness, malice, and deception (Addai, 2009; Kiruhi, 2013; Mamiru, 2012).

Arguably, higher education has played an important role in helping to achieve economic and social development in Africa (Adekanmbi, 2015). However, African education might require improvements, in order to achieve the desired outcomes associated with addressing current and potential future challenges (Nkomo, 2015). Specifically, African institutions of higher education have taught contents and learning methods, dependent on sources with non-African contexts and realities (Coyne, 2015; Amadi-Echendu, Phillips, Chodokufa, & Visser, 2016). For example, in a study of the political economy of contemporary Africa, Amin (2014) suggested that the World Bank and similar, allied organizations have programmed social sciences curricula in African universities. Africans have subsequently taught those methods in African universities and applied them in organizations of all types throughout the continent. Some people have subsequently questioned if the African use of Western leadership theories have applied well and can effectively apply within the African paradigm (Haruna, 2009). Similar questions have also persisted, regarding the cultural fit of Western leadership methods, specifically questioning if African agency would result in better fits for African contexts (Oginde, 2013). Regarding African agency, Achieng (2014) especially argued that Africans should seek to continue to develop and maintain their own "... African agency in tackling... economic [and] corporate... deficiencies" (p. 49). Achieng' further suggested that such African agency would necessarily result in "... processes and mechanisms that can well be appreciated as African solutions to Africa's problems" (p. 51).

Similar to what Amin (2014) and Achieng (2014) suggested, regarding transformation to overall African-led

paradigms, Aina (2010) specifically argued for the total transformation of African higher education. Aina suggested that African stakeholders should "... collectively and autonomously own their universities and the higher education sector, and... make them work in their national interests and for the benefit of their countries and their people..." (p. 24); and further suggested that no outside donors or other entities could do this for African countries.

Problem Statement, Research Questions, and Purpose

Barouni and Broecke (2014) suggested that higher education in Africa lacks content relevance, which has continued to impede the efficiency and effectiveness of educational outputs in business management. Additionally, African institutions of higher education have yet to present success stories of meeting continental needs with relevant, solution-oriented outputs (Nell & Cant, 2014). However, members of various sectors of society have begun to consider that higher education has resulted in positive economic results and therefore, they have begun to increasingly invest in it (Tsegaye, 2015). Because of the perceived lack of content relevance, it remains unclear what level of positive contribution African education objectively makes, in developing business leadership and management in Africa (Odhiambo, 2014). These arguments point to the overarching problem of not knowing whether Western leadership methods apply in African contexts and if any of them do, which ones and with whom.

In the area of leadership education, several research questions emerge, including: (a) what leadership styles do Africans, currently in the workforce, perceive that their leaders

use most; (b) what leadership styles do Africans, currently in universities, perceive that leaders in the workforce will use most; (c) do universities design and teach relevant curricula and content that address current African realities; and (d) what perceptions and practices regarding university-industry interactions and stakeholder involvement, in teaching and educational development, across Africa, do stakeholders (students and professionals) in Africa have?

The purpose of this study includes determining the perceptions of stakeholders, regarding the comparative magnitudes of applications and potential applications of leadership styles; and to determine comparative amount and quality of industry and university interactions.

LITERATURE REVIEW

In this section, we present an overview of the relevant literature of the factors considered. These factors include servant leadership, contingent reward leadership, leader-member exchange leadership, autocratic leadership, and quantity and quality of industry-university interactions. We also include theoretical foundations of relationships between variables, in order to justify the use of research analyses.

Servant Leadership

Greenleaf (1977) first coined the concept of servant leadership. The distinctive qualities and essential focuses of the servant leadership construct include *agapao* love, humility, altruism, vision, trust, empowerment, and service (Bekker, 2007; Greenleaf, 1977; Northouse, 2015; , Patterson, 2003; Winston, 2002). By design, servant leaders

put followers' interests first and servant leaders serve followers to meet the followers' needs (Northouse, 2015). People regard servant leaders as servant first (Greenleaf, 1977). Additionally, many theorists and practitioners have considered servant leaders as ethical. This could reflect one reason why the servant leadership concept has attracted attention from people and organizations (Liden, Wayne, Zhao, & Henderson, 2008).

Theorists have suggested that servant leaders meet long-term organizational goals, as they facilitate the growth, development, and well-being of employees, matters of top priority (Spears, 2002). Servant leadership underscores attentiveness to followers' concerns, empathy of followers, care for followers and nurturing of followers (Northouse, 2015). The stated best test of servant leadership includes realizing that beneficiaries grow, become healthier, wiser, freer, more autonomous, and more able to become servant leaders, themselves, because of the service that they have received from the leader (Greenleaf & Spears, 2002).

Contingent Reward Leadership

Contingent reward leadership applies recognition and rewards for goals as motivating factors for organizational members (Riggio & Bass, 2006). Effective leaders, who use the contingent reward style, encourage the hearts of the people that they lead by providing those followers with justified rewards (Kouzes & Posner, 2012). Contingent reward leadership occurs when "someone possesses a resource that another person wants and is willing to exchange that resource in return for certain behavior" (Konopaske, Ivancevich, & Matteson, 2013, p.338). Behavioral conditions that attract contingent rewards include compliance with orders, responding to requests, and following directions (Brown &

Moshavi, 2002). Contingent rewards may come to followers in various forms, such as public recognition, pay, leave, job assignments, pay raises, developmental opportunities, and meeting felt needs (Bass, 1997; Day & Antonakis, 2011; Yukl, 2013).

Contingent reward leadership also reflects some aspect of political leadership. This political leadership involves exchange tactics, designed to gain follower support by pledging something as a reward or benefit, in return for their future compliance or reminding them of continued support for prior favors (Konopaske, Ivancevich & Matteson, 2013).

Leader-Member Exchange (LMX)

Researchers focused on the dyadic relationships between leaders and followers as the basis of the Leader-Member Exchange (LMX) theory. They did so, because focusing on leaders alone would not provide enough information for them to understand the relational factors in organizations and the impacts of those factors on organizational outcomes (Oz, Derekoylu, Buyukbay & Yildiz, 2013). LMX serves as a relationship-based approach to organizational leadership (Yukl, 2013). LMX displays three dimensions: respect, trust, and obligation. Research has shown that these three constructs trigger the development and maintenance of mature leadership relationships between leaders and followers (Graen & Uhl-Bien, 1995). LMX theorists have further suggested that mutual respect and responsible care on the parts of both leaders and followers influence and guide the interactions and qualities of the associated dyadic relationships (Oz et al., 2013).

Within organizational work units, followers become part of "in-groups" or "out-groups" based on how well they and

their leaders work with each other (Northouse, 2016). Determinants for working together include the quality of the exchange relationship, typically based on followers' competence levels and their display of values and attitudes similar to those of their associated leaders (Yukl, 2013). By design, LMX addresses dyadic relationships associated with work, as opposed to those typically associated with friendship or other personal relationships (Graen & Uhl-Bien, 1995).

Autocratic Leadership

Autocratic leaders often make decisions alone, with little or no input from the rest of their teams (Belias & Koustelios, 2014). Sometimes, autocratic leaders act to secure inputs from other leaders or their followers, but then they make the decisions alone (Konopaske, Ivancevich & Matteson, 2013). Similarly, autocratic leaders usually discourage the participation of followers in organizational decision-making processes (Day & Antonakis, 2011). An environment of fear and culture of tyranny may prevail in the organization where an "…autocratic executive team" drives things their way (Konopaske, Ivancevich, & Matteson, 2013, p.239).

Autocratic leadership has proven useful in circumstances where urgency existed in decision-making efforts (Bhatti, Maitlo, Shaikh, Hashmi, & Shaikh, 2012). It has also proven beneficial in times of confusion and chaos, wherein people have generally lost control. In those times, researchers have shown that people "…look for decisive leaders" and find comfort in the leaders' decisiveness (Day & Antonakis, 2011, p.514). Similarly, in extreme conflict situations that include followers' perceptions of imminent threat or danger, followers appreciate autocratic leaders who can provide authoritative direction (Konopaske, Ivancevich &

Matteson, 2013). Hofstede (1991) also suggested that autocratic leadership works well (normatively) in Sub-Saharan African culture, as people in high power distance cultural dimensions prefer that style. Legitimacy represents the source of power for autocratic leaders (Lewin, Lippit &White, 1939). Therefore, autocratic leadership relies heavily on formalized structure and position in given organizations (Howell & Costley, 2001). Notwithstanding Hofstede's position, though, other researchers have suggested that regardless of power distance, the autocratic leadership style often represents controlling, bossy, and dictatorial behaviors, across all cultures (Belias & Koustelios, 2014).

University-Industry Relationships

University-industry relationships have proven measurable, by standards of quantity and quality of interactions (Steinmo, 2015). Both quantity and quality of those relationships can prove weak. Specifically, Steinmo also noted that differences in goals and approaches have often differed between universities and organizations in industry. Furthermore, Williams, Moser, Youngblood & Singer (2015) made the prediction that "without systemic and relevant changes to traditional methods instruction and workplace readiness, higher education may lose its viability as an educational partner to industry" (p. 50). Similarly, regarding Sub-Saharan Africa, Thamae, Thamae, & Thamae (2016) implied that fundamental differences exist between what universities provide and what potential industry partners can absorb. Additionally, in a study in Spain, D'Este, Llopis, Rentocchini, and Yegros (2016) also found that providing particular academic solutions, without having pre-existing relationships with industry partners, resulted in little positive

impact regarding the associated projects.

That said, both quantity and quality of university-industry relationships can improve, through goal alignment and relationship building. Steinmo (2015) suggested that"... common goals and understandings regarding the collaboration and the creation of personal relationships between the employees of firms and universities... " (p. 597) can help to overcome associated challenges. Similarly, D'Este, et al. (2016) also found that "... interdisciplinary research has a strong positive impact on the two entrepreneurial-related modes: firm creation and technology transfer" (p. 1). Thamae, Thamae, and Thamae (2016) further suggested that universities must take the initiative to implement strategic projects that will develop the interests of people in industry, in order to begin to build university-industry relationships.

Hypotheses

In this section, we present eight hypotheses, based on the theoretical support, as follows:

H1a. Students' perceptions of their likely workforce leader's servant leadership differ from professionals' (including pastors') perceptions of their actual workforce leader's servant leadership.

H1b. Students' perceptions of their likely workforce leader's contingent reward leadership differ from professionals' (including pastors') perceptions of their actual workforce leader's contingent reward leadership.

H1c. Students' perceptions of their likely workforce leader's leader member exchange leadership differ from professionals' (including pastors') perceptions of their actual workforce leader's leader member exchange leadership.

H1d. Students' perceptions of their likely workforce leader's autocratic leadership differ from professionals' (including pastors') perceptions of their workforce leader's actual autocratic leadership.

H2a. Students consider the quantity of professionals' university interactions of a different value than professionals and pastors do.

H2b. Students consider the quality of professionals' university interactions of a different value than professionals and pastors do.

H2c. Students consider the quantity of professionals' involvement in teaching and educational development of university students of a different value than professionals and pastors do.

H2d. Students consider the quality of professionals' involvement in teaching and educational development of university students of a different value than professionals and pastors do.

METHODS

In this section, we present the quantitative research methods that we used in data collection and analyses. Specifically, in this section, we describe the research design, target population, sampling procedures, instrumentation used, and the procedures of data analyses.

Research Design

In this research project, we conducted a cross-sectional, non-experimental study, wherein we intentionally sampled a particular population using the questionnaire method (Creswell, 2008). In research that employs the cross-sectional method, researchers sample members of a greater population and study them "… at only one point in time" (Cozby & Bates, 2014, p.234). As with typical forms of research, we used a research problem to dictate the choice of the design (Creswell, 2008). In this case, we selected the survey design, as it appeared to best apply in answering the research question.

Population and Sample

For our sample, we chose to survey members of Campus Crusade for Christ. Members of this organization, in Southern and Eastern Africa, serve as faith-based representatives of this Christian organization. The organization exists to fulfill the Great Commission, as mandated by Jesus Christ in Matthew 28:16-20 (SEA, 2010). The Campus Crusade for Christ works in 24 countries of the southern and eastern Africa. Its members include students of Christian, private, and state-run institutions of education,

marketplace leaders (professionals) and church representatives (SEA, 2010). The 2015 ministry report showed that the organization had a population of over 10,000 engaged disciples, representing multiple, industry-related vocational categories, with whom the organization works to accomplish organizational goals. We used a stratified probability sampling technique to give equal chances to students, professionals, and pastors to participate in this research. This technique facilitates improved accuracy of results over convenience sampling (Cozby & Bates, 2014). To achieve a representative cross-section of responses, we invited 750 potential respondents from ten countries to participate.

Instrumentation

For this study, we used a 5-point Likert-type scale that ranged from 1= strongly disagree to 5=strongly agree, to record all responses of participants. The instruments for servant leadership, contingent reward leadership, leader member exchange leadership, autocratic leadership, included:

Servant Leadership: measured using the 10-item New Parsimonious Measure of Servant Leadership Behaviors (Winston & Fields, 2015) to assess servant leadership perceptions of followers. Fields and Winston (2010) previously reported an internal reliability Cronbach coefficient alpha, for the scale, of 0.96.

Contingent reward leadership: measured using the 20-item Contingency Questionnaire (Reitz, 1971) to assess contingent reward leadership perceptions of followers.

Leader Member Exchange (LMX): measured using the 7-item LMX7 Questionnaire (Graen & Uhl-Bien, 1995) to assess LMX leadership perceptions of followers.

Autocratic leadership: measured using the 18-item Leadership Styles Questionnaire (Sagepub.com). The leadership style chosen for this study is authoritarian leadership. The items for authoritarian leadership include items 1, 4, 7, 10, 13 and 16 (Sagepub.com).

Interaction quantity and quality: measured by four items that asked students to rate professionals (including pastors) and professionals to rate themselves, regarding the quantity and quality of interactions with their universities and their involvement in teaching and educational development of university students.

Data Collection Procedures

We sent questionnaires, via email and in English, to 750 students, professionals, and pastors who work with Campus Crusade for Christ in ten countries of Africa. These countries include Malawi, Mauritius, Lesotho, Swaziland, Botswana, Zimbabwe, Zambia, Ethiopia, Rwanda, and Kenya. Research teams of three people per country assisted in printing, disseminating, proctoring, collecting, and returning hard copy versions of the questionnaires.

Analysis Plan

We recorded the raw data directly into *SPSS* (v. 24) and performed all analyses therewith. We first ran *Cronbach's alpha* tests to determine the internal reliability of the listed variables. We next conducted a *Pearson's Product Moment Correlation* between the leadership variables, in order to

determine if any relationships exist between the followers' perceptions of those variables. We then conducted independent variables *t*-tests to compare perceptions of leadership styles and university-industry interactions and involvement among students, professionals and pastors. Finally, we conducted a multiple ANOVA, in order to understand the variances of interactions and involvement among the stakeholders (Girden & Kabacoff, 2011; Green & Salkind, 2013; Pallant, 2016; Williams & Monge, 2001).

RESULTS

This section displays the results of the study, including descriptive statistics, correlations, and *t*-tests.

Descriptive Statistics

A total of 619 respondents participated in the study and 617 responses met the criteria for inclusion in the study. The demographics of these 617 included: 316 students, 143 pastors, and 158 other professionals; 281 women and 336 men; and numbers of participants, by country, included: (a) Botswana – 23, (b) Ethiopia – 84, (c) Kenya – 60, (d) Lesotho – 97, (e) Malawi – 34, (f) Mauritius – 24, (g) Rwanda – 41, (h) Swaziland – 89, (i) Zambia – 82; and (j) Zimbabwe – 83. The majority of respondents reported having 1 to 5 years of tenure, while 143 respondents reported having 6 or more years of tenure.

Comparative Analyses

Table 1 shows the Cronbach alphas, means, and standard deviations for each of the several leadership constructs.

Table 1. Descriptive Statistic for Leadership Factors.

Leadership Style	Cronbach α	Mean	SD
Servant Leadership	0.82	3.72	0.66
LMX Leadership	0.70	3.35	0.73
Contingent Reward Leadership	0.76	3.49	0.46
Autocratic Leadership	0.58	3.35	0.64

The results of the Pearson Product Moment Correlations, shown in Table 2, indicate that significant, positive relationships exist between the various leadership constructs, with one exception.

Table 2. Pearson Product Moment Correlations of Leadership Factors.

	SL	CRL	LMXL
CRL	.51**		
LMXL	.53**	.53**	
AL	.03	.33**	.15**

Note: ** represents $p < .001$, two-tailed, N = 617.

The next step in the study included conducting independent samples *t*-tests, to determine if significant differences exist between perceptions regarding the potential applications of leadership, by students, and the actual applications of leadership, by professionals. Regarding the comparison of results of projected leader ratings by students

and actual leader ratings by professionals, including pastors, the two-tailed results indicated: t (613) = 4.05, p = .00 < .05 for servant leadership; t (615) = 1.15, p = .25 > .05 for LMX leadership; t (605) = -0.10, p = .92 > .05 for contingent reward leadership; and t (615) = -4.05, p = .00 < .05 for autocratic leadership. Thus, the results indicate support for the acceptance of hypotheses H1a and H1d. Significant differences do exist between perceptions of potential applications of servant leadership and autocratic leadership, by students, and the perceptions of actual applications of those styles of leadership, by professionals. Additionally, the negative *t*-value associated with autocratic leadership, represents the existence of a significantly higher perception of the potential use of autocratic leadership, as perceived by university students, than the actual use of autocratic leadership, as perceived by professionals. In fact, professionals rated autocratic leadership the lowest among all of the styles investigated, as noted in Table 3. Furthermore, the results indicate no support for the acceptance of hypotheses H1b and H1c. Therefore, we reject them and accept the null.

Table 3. Descriptive Statistic for Leadership Factors, by Group.

Leadership Style		Mean	SD
Servant Leadership	Students	3.61	0.65
	Professionals	3.83	0.65
LMX Leadership	Students	3.31	0.63
	Professionals	3.38	0.82
Contingent Reward Leadership	Students	3.49	0.45
	Professionals	3.49	0.48
Autocratic Leadership	Students	3.45	0.59
	Professionals	3.24	0.68

We also conducted independent samples *t*-tests to determine if significant differences exist between perceptions of students and professionals, regarding the quantity and quality of general interactions of professionals with universities and the quantity and quality of teaching and educational development of university students by professionals. Regarding the comparison of results of general interactions of professionals, by students and professionals, including pastors, the two-tailed results indicated: t (615) = 3.27, p = .00 < .05 for quantity t (615) = 2.82, p = .01 < .05 for quality. Thus, the results indicate support for the acceptance of hypotheses H2a and H2b. Significant differences do exist between perceptions the quantity and quality of professionals' general interactions in universities. In both quantity and quality, professionals rated themselves higher than the university students rated them, as noted in Table 4.

Table 4. Descriptive Statistic for Professional-University Interactions, by Group.

Interaction Type		Mean	SD
Quantity of General Interactions	Students	3.22	0.85
	Professionals	3.46	0.93
Quality of General Interactions	Students	3.08	0.84
	Professionals	3.28	0.90
Quantity of Development Efforts	Students	3.06	0.94
	Professionals	3.01	1.11
Quality of Development Efforts	Students	3.06	0.78
	Professionals	3.05	1.01

Regarding the comparison of results of professionals teaching and providing educational development of university students, by students and professionals, including pastors, the two-tailed results indicated: t (615) = -0.69, p = .49 > .05 for quantity and t (615) = -0.15, p = .89 > .05 for quality. These

results indicate no support for the acceptance of hypotheses H2c and H2d. Therefore, we reject them and accept the null.

DISCUSSION

The purpose of this study included investigating students and professionals' perceptions of leadership styles in Africa and how university-industry relations in Africa might contribute to those perceptions. This section provides insights into the findings and global implications regarding the relationships between the various associated factors, limitations of the study, and proposed opportunities for future research.

Findings

In this study, the foci included: (a) determining perceptions of four leadership styles (Servant Leadership, LMX Leadership, Contingent Reward Leadership, and Autocratic Leadership), by students and professionals, including pastors and (b) determining the perceptions of quantity and quality of interactions of professionals with universities and in the educational development of university students. Through tests of internal reliability and correlation, and through *t*-tests, our analyses supported the acceptance of four of the hypotheses: *H1a, H1d, H2a, and H2b; and the rejection of the other four hypotheses: H1b, H1c, H2c, and H2d. These results serve to indicate several things.*

In this study, students ranked the four leadership styles investigated, from highest to lowest, in this order: servant leadership, contingent reward leadership, autocratic leadership, and LMX leadership. Professionals ranked the four leadership styles in this order: servant leadership, contingent reward leadership, LMX leadership, and autocratic leadership. From this, we first conclude that notwithstanding the outcomes of previous research (Hofstede, 1991; House,

Hanges, Javidian, Dorfman & Gupta 2004), either power distance has decreased in Africa, between leaders and followers, or it no longer necessarily presents as the previously observed predictor of autocratic leadership, in African contexts. Power distance reflects the "... degree to which members of a collective expect power to be distributed equally" (Gemechu, 2015, p. 8). The greater the amount of power distance, the greater the amount of gap between the perceived or felt power between leaders and followers. Gemechu (2015) further suggested that in high power distance cultures, people generally expect followers to adhere to the instructions of their leaders, in most cases, without question. Both students and professionals in this current study cited servant leadership as the style of greater predicted use and actual use, respectively, and by significant margins. In fact, *post hoc t*-tests of the data revealed differences between servant leadership and autocratic leadership of: $t(315) = 3.50$, $p = .00 < .05$ for students and $t(300) = 11.20$, $p = .00 < .05$ for professionals. This clearly indicates that, by some measures, leaders in African organizations have adopted the use of servant leadership, in praxis, and students have come to expect that their future leaders will gravitate toward the use of that style, as well.

Next, the results of this study suggest that perceptions differ between the levels of servant leadership and autocratic leadership that students anticipate that their leaders will use and the levels of those styles that professionals actually experience in businesses and other organizations. On average, students anticipate experiencing more autocratic leadership and less servant leadership, in the workforce, than what professionals perceive that they actually experience. These differences suggest that, at least to some degree, the leadership preparations provided by university programs do not correlate with real-world dynamics, in African contexts. This also parallels with the findings of Kolk and Rivera-Santos (in press) that: "... scholars need to better understand the opportunities of Africa as a context for Africa-bound, Africa-

specific, and universal research not only in areas related to business and society issues but also for the broader management literature" (p. 14).

Finally, the results of this study suggest that students and professionals generally agree on the nominal quantity and quality of professional engagement in teaching and development efforts of university students. However, they do not agree in their perceptions regarding the quantity and quality of general interactions that professionals have with universities. In both quantity and quality, professionals consider that they generally interact with universities significantly more than students perceive that they do. Of course, students do not necessarily have access to or knowledge of all of the interactions in which professionals and universities engage. However, if perceptions serve as peoples' realities, university graduates will likely enter the workforce with relatively lower expectations of maintaining university-industry relations than the level that currently exists. Researchers from several countries have argued the need for more and higher quality interactions between industry and universities, in order to meet global demands, into the remainder of the 21st century (Culkin & Mallick, 2011; Williams et al., 2015). Undoubtedly, some responsibility lies with university leadership educators and administrators, to perform needs assessments and to tailor their programs to industry needs. However, we posit that professionals in industry and other organizations also have vested interests in ensuring that graduating university students, at all levels, receive the knowledge and develop the skills that they will need, upon entering the workforce. To that end Velasco (2016) concluded that: "business schools must work hand in hand with local... industries to equip students with more recent industry trends and practical, realistic approaches to business ventures" (p. 81). Arguably, both members of universities and professionals in industry and other organizations should take opportunities to initiate visible working relationships, in order to accomplish the ends that both groups seek.

Limitations of the Study

Several potential limitations exist within this study. First, the test of the autocratic leadership variable, for internal reliability, scored well below the standard rule of thumb (Girden & Kabacoff, 2011; Williams & Monge, 2001) Cronbach's alpha of .70. This proved consistent among the results for both students and professionals. Neither would removing any items have significantly raised this Cronbach's alpha score. This causes us to conclude that differences likely exist between the generally accepted theory of autocratic leadership (arguably, the oldest theory tested in this study) and the perceptions of the actual applications of autocratic leadership, in African contexts. If these differences prove to exist, it further confirms that at least some standard Western leadership theories do not and likely cannot apply, as written, in African contexts. Next, the population considered, might not well represent all Africans. Some theorists and researchers have suggested that a relationship exists between Christianity and servant leadership (Dearth & West, 2014; Hale & Fields, 2007). If this relationship proves to exist, then, as the population sampled in this study mainly consisted of professing Christians, biases may have existed toward employment and participation in organizations predisposed to exercising servant leadership, over the use of other forms of leadership. Finally, we recognize that students, professionals, and pastors, although arguably serving as principals, do not represent all of the stakeholders involved in university-industry relationships.

Opportunities for Future Research

The results of this current study cause us to suggest the need for further research. One of the first questions to answer includes whether the results regarding the preferences shown for servant leadership, over the other styles, remains constant when considering African populations with representative ratios of various religious

beliefs (and non-beliefs) found throughout African society. Next, because we only studied the perceptions of students, professionals, and pastors in this present study, we recommend that researchers similarly investigate the perspectives of university administrators and faculty members, as well as any other relevant stakeholders (e.g., affiliated representatives from various governmental agencies and non-governmental organizations, etc.).

Conclusion

Even though Africa possesses rich natural resources and has made great strides in development since the colonial period, some people still note Africa for and as: "… struggle, poverty, under-development, socio-political instability, third world, dark continent, and HIV/AIDS…" (Bilong, 2008, p.16). Education can perform a significant role in helping to further improve economic and social developments (Adekanmbi, 2015). However, especially in the subject area of leadership, higher education in Africa lacks content relevancy. This lack of content relevancy impedes efficiency and effectiveness of educational outputs, regarding leadership, both in businesses and in other organizations (Barouni & Broecke, 2014). This suggests the need for better university-industry interactions and more quality involvement in higher education processes, by professionals, in Africa.

Specifically, in order to better align theory with reality, university faculty should modify their leadership curricula. Additionally, theorists, researchers, curriculum developers and faculty members should focus more on stressing the applicable, increased uses of servant leadership behaviors. They should also further investigate the actual dynamics associated with autocratic leadership and then determine the appropriate levels and constructs of that style to use, in African contexts.

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NITRITE CONTENT OF PROCESSED MEAT PURCHASED IN PUBLIC MARKETS AND GROCERY STORES AROUND ILOILO CITY

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ABSTRACT

Nitrates and nitrites are used as preservatives, affects flavor and develop cured meat color. Too much nitrite from meat could produce nitrosamines which are related to spontaneous intrauterine growth restriction, abortions, birth defects and Methemoglobinemia or "blue baby syndrome", and especially cancer. This study aimed to determine the concentration of nitrite in different processed meats purchased from markets and grocery stores around Iloilo City and to compare to the levels set by BFAD. Cured samples of hotdog, ham, longganiza, chorizo and tocino were purchased from different public markets and grocery stores around Iloilo City. The nitrite content of these cured meat products were analyzed using a UV-Vis spectrophotometer and the results were within the limits set by BFAD which is 416ppm for chorizo, longganiza and tocino; 134ppm for hotdogs and168ppm for ham. The Acceptable Daily Intake (ADI) of 0.07 mg nitrite per kg body weight was set by JECFA-WHO/FAO. On the basis of a 65kg body weight, daily consumption must not exceed 42g, 117g, 170g, 262g, and 94g for chorizo, tocino, longganiza, ham and hotdog respectively. On the basis of a 25kg child, the hotdog consumption must not exceed 36g. It

is advised to eat cured meats in moderation to prevent the bad effects of nitrite consumption.

INTRODUCTION

Background and Rationale

Meats are flesh taken from dead animals used as food. This product is perishable due to microorganisms like bacteria, yeasts, or molds which are present in the environment (Ray, 2017). Meat curing is the addition of salt, coloring ingredients, and seasoning in order to impart unique properties to the product. Nitrates and nitrites of either potassium or sodium are used to cure meat. They give a bright reddish or pink color which attribute for consumer acceptance (Cornforth and Jayasingh, 2004). More nitrites are required to prevent rapid fading and non-uniform curing while also maintaining its cured color throughout an extended shelf life (Sebranek and Bacus, 2007). In a series of normal reactions, nitrite is converted into nitric oxide which combines with myoglobin, the pigment responsible for the natural red color of uncured meat. They form nitric oxide myoglobin, which has a deep red color that changes to the characteristic bright pink normally associated with cured and smoked meat when heated during the smoking process. (Epley, Addis, and Warthesen, 1992). When nitrite is added to meat systems, it reacts with a number of chemical components such as protein (Cassens, 1997). Nitrites further affect flavor by acting as powerful antioxidants (Ray, 2017). Sodium nitrite prevents the growth of a microorganism known as *Clostridium botulinum*, the bacteria that causes botulism. Nitrites are considered to be more effective against gram- positive bacteria (Bauermann, 1979).

Nitrites must be used with caution during curing. Nitroso compounds have the potential to yield carcinogenic nitrosamines (Cassens, 1990, 1997). Nitrite is a toxic

inorganic contaminant that is hazardous to the health of humans and other organisms. High nitrite concentrations have been associated with methemoglobinemia or "blue baby syndrome" in infants (Titov and Petrenko, 2005), carcinogenic nitrosamine (Li, et. al, 2012), gastric cancer (Jakszyn and Gonzalez, 2006), spontaneous intrauterine growth restriction (Lyall et. al., 1996), abortions (Aschengrau, Zierler, and Cohen, 1989) and birth defects in the central nervous system (Brender et. al., 2004). The International Agency for Research on Cancer (IARC) found that eating 50 grams of processed meat every day will increase the risk of colorectal cancer by 18% and classified processed meat as carcinogen (IARC, 2015). Santarelli, Pierre and Corpet (2008) concluded that those eating processed meat have an increased risk of having colorectal cancer by 20-50% compared with non- processed meat eaters. Parnaud and Corpet (1997) showed a correlation between meat consumption and colorectal cancer incidence. According to UK Biobank, consuming processed meat may increase the risk of breast cancer (Anderson, et al. 2017). Larsson, Orsini and Wolk in 2006 concluded that increased consumption of processed meat can be associated with an increased risk of stomach cancer. Hu et al. (2011) found that processed meat was significantly related to the risk of the stomach, colon, rectum, pancreas, lung, prostate, testis, kidney and bladder, including cancer and leukemia. Zhu et al. in 2013 indicated that consumption of red meat may increase the risk of gastric cancer. Norat et al. in 2005 associated the intake of red and processed meat to colon cancer while inversely associated fish intake to colon cancer. Oba et al. in 2006 concluded that men with high consumption of processed meat may increase their risk of colon cancer compared to those with low processed meat consumption. A 14% colorectal cancer risk increase for every 100g/day

consumption of processed meat, 25% in colon cancer, and 31% in rectal cancer was analyzed by Chan et al. in 2011. English et al. in 2004 concluded that consumption of red and processed meat is associated with an increased risk of rectal cancer while consumption of chicken and fish has no risk increase. In an episode of Salamat Dok (2015), Dr. Earle Castillo of UP-PGH reiterated that consuming three hotdogs is like having the effects of smoking one pack of cigar. Demeyer et al. (2016) found that when heme protein is broken down in the gut, N-nitroso chemicals are formed. These chemicals have been found to damage the cells in the bowel lining, leading to bowel cancer. These N-nitroso chemicals also form when processed meat is digested. In addition, the nitrite and nitrate added as meat preservatives produce these same N-nitroso chemicals. Pure nitrite, if consumed at levels of 3-5 grams can be very dangerous and can cause death because it binds to oxygen in the body stronger than the hemoglobin-oxygen binding in the blood thus, not allowing oxygen to reach several important organs (Sindelar & Milkowski, 2011).

Due to the damage caused by nitrite to human health, the World Health Organization (WHO) recommends an acceptable daily intake of nitrite concentration in meat products at 200 ppm. The JECFA-WHO/FAO (2002) Acceptable Daily Intake is 0.07 mg nitrite per kg body weight. A 50 kilogram person should not consume more than 3.5 mg nitrite a day from foods containing nitrite. The Bureau of Food and Drugs under the Department of Health indicated that for tocino, beef tapa, longganisa and chorizo, the maximum allowable limit is 416 mg/kg of nitrite. For ham, the BFAD has approved an allowable daily limit of 168 mg/kg. Hotdog, corned beef, Vienna sausage, luncheon meat, beef and meat

loaf have a BFAD allowable daily limit of 134 mg/kg (DOH-BFAD, 2006).

Significance of the Study

This study will be beneficial to all consumers who are eating processed meats as they will be aware of the amount of nitrites present in these foods. They could adjust their consumption of processed foods based on this study. In the future, government agencies like BFAD may tap the University Research Center for other researches regarding processed meat products.

Objectives

This study determined the levels of nitrite in different processed meat purchased in markets and grocery stores around Iloilo City and compare them to the levels of nitrite set by DOH-BFAD for allowable consumption.

Hypothesis

1. There is no significant difference in the amount of nitrites from the processed meat samples purchased in public markets and grocery stores around Iloilo City.

2. The cured meat samples purchased in public markets and grocery stores around Iloilo City passed the limits set by DOH-BFAD.

Scope and Limitations

This study only measured the concentrations of nitrites in different brands of processed meat products purchased around Iloilo City. The samples were limited only to processed pork meats that are locally produced and commercially available in the markets and in grocery stores around Iloilo

City. Chorizo, ham, hotdog, longanisa and tocino were considered as samples. The concentration of nitrites in these cured meat samples were measured using a UV-Vis Spectrophotometer. This study did not include the common practices for the preparation and processing of cured meat as it is against research ethics.

MATERIALS AND METHODS

Collection of Samples

The cured pork meat samples were taken from different markets and grocery stores located within Iloilo City based on Figure 1. Sampling was done in the month of December 2018. One kilogram of cured pork meat was purchased for every kind of product in all markets and grocery stores included in the study.
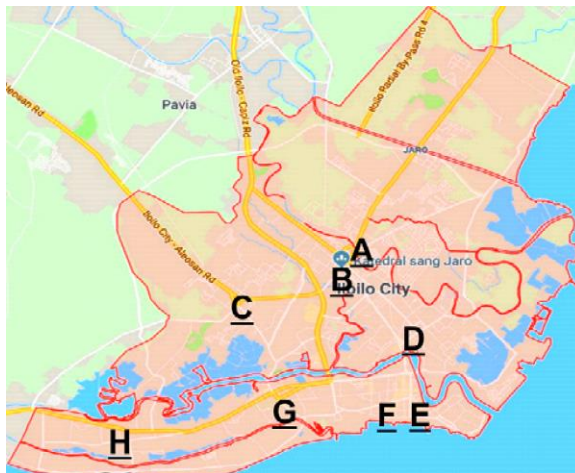
Figure 1. Iloilo City Map where cured samples were collected
from different public markets.
*(Retrieved from https://www.google.com.ph/maps/search/iloilo+
city+map+pdf/ @10.7289411,122.5522316,13z)*

      The samples that were taken from grocery stores and
local public markets around Iloilo City were either branded or
locally made. Locally made cured meat samples produced
and packed locally within Iloilo City may have no product
labels and can be considered as having less quality control.
Processing may be done manually and are usually being sold
using a weighing balance in the wet markets. Branded cured
meat samples have proper labeling, are produced within the
Philippines, and are packed in definite weights. Machines and
instruments are used to process branded samples, and they
undergo with strict quality control. Branded cured meat
samples are usually sold in the grocery stores and some in
the public markets. Cured samples with proper packaging and
made within Iloilo City were considered as branded even
though they were locally made. Chorizo, longganisa and
tocino samples used in the experiment were either branded or

locally produced. Ham and hotdog samples used in the experiment were all branded as there are no locally produced products being made in Iloilo City.

Preparation of the Sample/Test Portion

A one kilogram sample was cut into smaller pieces and quartered. From the quartered sample, five grams of the homogeneous sample was used for deproteination and color reaction. The remaining samples were kept in an air-tight, closed container under refrigeration for 4°C for storage.

Deproteination

The test portion was quantitatively transferred into a 250-ml beaker and added with 5 ml of saturated borax solution and 100 ml of hot water. The beaker was heated for 15 min on a boiling water bath and shaken repeatedly. The beaker and its contents were allowed to cool to room temperature and added with 2 ml each of Carrez I and Carrez II solutions. It was mixed thoroughly after each addition and then filtered. The filtrates were placed into a 250 ml volumetric flask, diluted to the mark with distilled water, and mixed. The flask was allowed to stand for 30 minutes at room temperature (ISO 2918-1975, 2007).

Determination of nitrite

Principle

The nitrite in the sample was determined through formation of a reddish purple azo dye produced at pH 2.0 to 2.5 by coupling diazotized sulfanilic acid solution with Alpha-

napthylamine. The method for nitrite analysis was based on ISO 2918-1975 (2007) Meat and meat products – Determination of nitrite content and on AOAC 973.31 Nitrite in Cured Meat – Colorimetric Method (2000).

Color Reaction and Instrumentation

Five milliliters portion of the filtrate was pipetted into a test tube. A 0.2 ml of Alpha-napthylamine solution and 0.2 ml of Sulfanilic acid solution were then added. The solution was mixed and allowed to stand for 10 min at room temperature. The absorbance of the solution was measured in a 1 cm cell using a spectrophotometer set at a wavelength of 538 nm. The UV-Vis spectrophotometer was used to determine the concentration of nitrite in cured meat samples. It required standards with known nitrite content to establish the relation between the measured absorbance and the nitrite concentration which relied on the Beer-Lambert Law.

Analysis of Nitrite Using UV-Vis Spectrophotometer

The instrument was warmed up for 15 min for electrical current stability. The instrument parameters for the nitrite analysis were set. The wavelength was set at 538nm. Distilled water was added with 0.2ml of Alpha-napthylamine solution and 0.2ml of Sulfanilic acid solution. This solution was used to auto zero the instrument and used as 0 ppm. The standard solutions were measured according to the increasing order of concentration. The instrument gave an absorbance result when a standard or a sample solution was introduced to it via a 1 cm cuvette cell. These absorbance results were recorded. Plotting the prepared concentration with its corresponding

absorbance produced a straight line. This line followed the line equation: y=mx+b where y is the absorbance given by the instrument, m is the slope of the line, b is the line intercept and x is the unknown concentration. Rearranging this equation to determine the concentration of the unknown would have: x=(y-b)/m. Once a standard curve was established, the blank and the sample were measured. The nitrite content of the cured meat samples and allowable daily intake were determined using this formula:

$$\text{ppm } NO_2^- = \frac{\text{concentration obtained}}{\text{from line equation in } \mu/ml} \times \frac{250 \text{ ml total volume}}{\text{weight of sample in grams}}$$

$$\text{Allowable daily intake of nitrite} = \frac{0.07 \text{mg } NO_2^-}{\text{kg body weight}} \times \text{kg body weight} \times \frac{\text{kg food}}{\text{value of } NO_2^- \text{ in mg}}$$

Data Processing and Analysis

All analyses were carried out in triplicates. The mean, standard deviation and significances of each data were determined. The comparisons of nitrite concentration on different processed meat purchased in markets around Iloilo City were analyzed using One-Way ANOVA (LSD and Duncan's Multiple Range Test) while the data comparison with the acceptable values by BFAD and WHO values were analyzed using t-test. All data analyses were done using Statistical Package for Social Science (SPSS) version 17.0.0 for Windows. Statistical tests were performed at 95% confidence level.

RESULTS AND DISCUSSION

The nitrite contents of chorizo, tocino and longganisa are shown in Table 1. Results showed that all of the chorizo, tocino and longganisa samples purchased on the local markets and on the grocery stores around Iloilo City were within the limits set by BFAD.

Chorizo is a Filipino sweet sausage, brought by the Spaniards and originated from Mexico. It is typically made with a highly seasoned ground pork. It is usually fermented, cured or smoked and wrapped in a casing of pig's intestines. In the Philippines, the chorizo is rounded and it contains spices that were mixed with the ground pork. The color of the product depends on the amount of spices placed inside and the cured meat. Based on the results obtained in Table 1, Brand K contained more nitrite compared to other chorizo brands while Brand B contained the least amount of nitrite. Eventhough Brand K is a branded product which underwent strict quality control, its ingredients indicated that it contained more nitrite salts than other chorizo products. It can be noted that only two locally made products have nitrite concentrations above ten ppm while all the branded samples have concentrations higher than 10 ppm. All of the chorizo products were within the safe limits imposed by BFAD which is 416 ppm.

Tocino means bacon in Spanish. It is made of pork fat, salt, vinegar, minced garlic, onion powder, soy sauce; sodium nitrite as preservative and food coloring as optional (Joven, 2011). Based on the result, Brand J had the highest nitrite content of 39.28ppm while Brand C had the lowest nitrite content of 3.96ppm. Compared to locally made tocino which can be bought in the markets around Iloilo City, Brand J added

more nitrite salts to their products compared to other tocino products. Tocino samples from the markets have very low nitrite content except for Brands C and D which have concentrations above 10ppm. Only one brand from the grocery store had a concentration of less than 10ppm while other brands were above 10pm. All of the tocino samples purchased were within the limits of BFAD.

Longganisa is also a Filipino sweet sausage which originated from Spain. The difference between longganisa and chorizo is that longganisa is longer, made with minced meat and seasoned with paprika, cinnamon, aniseed, garlic and vinegar (Tan, 2016). Based on Table 1 results on longganisa, Brand N had the highest nitrite content at 26.83ppm while Brand E had the lowest nitrite content at 2.13ppm. Brand N has added more nitrite salts in its longganisa than other longganisa products that were sold in Iloilo City. The concentrations of nitrite in all markets and branded longganisa products were almost equal. From the result, all of the longganisa products purchased were within limits set by BFAD.

It can be noted that tocino, chorizo and longganisa branded samples contain more nitrite salts compared to their locally made counterparts. Adding more nitrite salts would increase the shelf life as they are sold around Philippines. Local products of tocino, longganisa and tocino samples have an average nitrite concentrations of less than 10ppm while their branded samples have an average nitrite concentrations of more than 10ppm.

Table 1. Nitrite Content in Chorizo, Longganisa and Tocino.

	Chorizo	Tocino	Longganisa
	NO_2 in mg/Kg	NO_2 in mg/Kg	NO_2 in mg/Kg
	Mean ± SD	Mean ± SD	Mean ± SD
Market			
Brand A	8.17 ± 0.25[c]	3.99 ± 0.16[a]	5.92 ± 0.04[h]
Brand B	3.58 ± 0.13[a]	3.96 ± 0.05[a]	2.30 ± 0.08[b]
Brand C	7.24 ± 0.12[b]	16.01 ± 0.15[f]	4.66 ± 0.03[f]
Brand D	12.74 ± 0.09[f]	12.48 ± 0.07[e]	10.88 ± 0.02[k]
Brand E	8.63 ± 0.22[d]	5.93 ± 0.07[b]	2.13 ± 0.06[a]
Brand F	7.97 ± 0.21[c]	6.56 ± 0.14[c]	2.14 ± 0.06[a]
Brand G	11.71 ± 0.29[e]	7.56 ± 0.04[d]	2.80 ± 0.03[c]
Grocery Store			
Brand L	36.96 ± 0.12[j]	24.81 ± 0.50[i]	
Brand P	7.03 ± 0.25[h]		
Brand N	26.80 ± 0.04[i]	25.32 ± 0.19[j]	26.83 ± 0.06[m]
Brand Q	15.87 ± 0.17[g]		
Brand K	108.83 ± 0.92[k]	24.11 ± 0.080[i]	
Brand H		7.99 ± 0.11[d]	7.21 ± 0.06[i]
Brand M		18.59 ± 0.22[g]	4.01 ± 0.08[e]
Brand I		24.79 ± 0.44[j]	10.58 ± 0.04[j]
Brand J		39.28 ± 0.53[k]	17.93 ± 0.06[l]
Brand R			4.84 ± 0.05[g]
Brand AB			3.28 ± 0.07[d]
Brand O		20.66 ± 0.32[h]	
BFAD Allowable Limits	416	416	416

Note: Values are mean ± standard deviation. Values having different superscripts within a column are significantly different at p<0.05. Lowest value are assigned with a superscript a.

Table 2 shows the nitrite contents of ham and hotdog. Results shows that all of the ham and hotdog samples purchased from the local markets and on the grocery stores around Iloilo City were within the limits set by BFAD.

Ham is made from a bone-in pork shoulder which was cured and added with brine for salting effect. From the results in Table 2, it shows that Brand J had a nitrite content at 17.35ppm which was highest among the other brands of ham

while Brand M had the lowest nitrite content at 1.84ppm. All of the ham brands passed the requirements and did not exceed the BFAD limits.

Hotdog in the Philippines is colored red while in other countries it is usually tan-colored. According to San Miguel Purefoods Company, they added food coloring to the casing. The bright red color adds a dose of fun and vibrancy for eating enjoyment, as well as helping distinguish Filipino hotdogs from the blander, more common franks and sausages. The ingredients of the Purefoods TJ hotdogs were separated turkey, pork, water, modified food starch, salt, sodium phosphates, spice, sodium erythorbate, flavoring, sodium nitrite, Oleoresin of Paprika and Red 40 as coloring (Ligaya, 2017). Other hotdog brands may have more or less the same ingredients. Based on Table 2, Brand V had the highest nitrite content among the different brands of hotdogs with a nitrite concentration of 48.58ppm while Brand Z had the lowest nitrite concentration of 7.16ppm. Hotdogs had color ranges of light red to slightly bright red in color. The tendency of nitrite accumulation in hotdogs is high based on their texture. Tocino and hams are made from a cut meat while chorizo and longganisa are made from the same grounded or minced pork meat. Hotdogs are made from different trimmings of pork meat which makes them porous in texture compared to other processed meat. The porosity of hotdogs could absorb more nitrite salts compared to other cured meat samples. All of the hotdog brands purchased did not reach the limits of nitrite content set by BFAD.

Ham and hotdog samples were all branded because those that were sold in the markets were all branded. No locally manufactured ham and hotdogs are sold within Iloilo

City. On the average, ham products contain less nitrite salts as compared to hotdogs. An average of more than 10ppm nitrite concentrations can be found in hotdogs.

Table 2. Nitrite Content in Ham and Hotdog.

Brand	Ham NO$_2^-$ in mg/Kg Mean ± SD	Hotdog NO$_2^-$ in mg/Kg Mean ± SD
Brand L	4.97 ± 0.05[e]	35.50 ± 0.07[f]
Brand H	3.66 ± 0.05[b]	8.87 ± 0.05[c]
Brand N	12.43 ± 0.06[g]	
Brand R	6.79 ± 003[f]	
Brand I	13.47 ± 0.08[h]	
Brand P	4.00 ± 0.04[c]	
Brand S	4.64 ± 0.06[d]	
Brand J	17.35 ± 0.08[j]	
Brand T	14.80 ± 0.05[i]	
Brand M	1.84 ± 0.08[a]	
Brand U		11.53 ± 0.05[d]
Brand V		48.58 ± 0.06[h]
Brand W		29.58 ± 0.08[e]
Brand X		48.28 ± 0.06[g]
Brand Y		8.38 ± 0.07[b]
Brand Z		7.16 ± 0.03[a]
BFAD Allowable Limits	168	134

Note: Values are mean ± standard deviation. Values having different superscripts within a column are significantly different at p<0.05. Lowest value are assigned with a superscript a.

Based on the results, all of the cured meat samples passed the BFAD approved limits. It can be noted that consuming more than the recommended amount may have adverse effects on our body. Locally produced cured meat products contain less nitrite salts than branded ones as they are usually meant to be consumed within a week. More nitrite salts are added for branded products for the purpose of having a longer shelf life while being sold around the Philippines.

The comparison between the allowable daily intakes of cured meat on adult and on a child with specific weights are shown in Table 3. On the basis of a 65 kg adult, the daily consumption must not exceed 42g, 117g, 170g, 262g, and 94g for chorizo, tocino, longganiza, ham and hotdog, respectively. On the basis of a 25 kg child, the hotdog consumption must not exceed 36g, while for chorizo, tocino, longganiza and ham are 16g, 45g, 65g and 101g, respectively. Based on the table, the allowable daily intake of the different cured pork meat samples are proportional to the consumer's body weight. Comparing the values of Table 3, it is safe and recommended to eat less chorizo compared to other cured pork meat samples. The computation is based on the highest concentration of nitrite obtained on different cured pork meat samples.

Table 3. Allowable Daily Intake of Cured Pork Meat Sample Depending on Specific Body Weight.

	25 kg body weight	**65kg body weight**
Chorizo	16 g	42 g
Tocino	45 g	117 g
Longganisa	65 g	170 g
Ham	101 g	262 g
Hotdog	36 g	94 g

CONCLUSION AND RECOMMENDATION

Based on the study conducted, it can be concluded that all of the processed meat purchased locally around Iloilo City had lower nitrite content and were within the limits set by BFAD. Branded samples of chorizo, longganisa and tocino

contain an average higher amount of nitrite compared to locally made products. There were significant differences among groups of processed meats in terms of nitrite content and the BFAD allowable limits.

The allowable daily intake of nitrite from cured pork meat samples depends on the person's body weight. Chorizo must be consumed in moderation and awareness as it has the highest level of nitrite content compared to other cured pork meat samples.

It is recommended to notify the Regional Office of BFAD about this study that the processed meat purchased in public markets and grocery stores around Iloilo City are within the limits set by their department. Since the Regional Office of BFAD does not monitor nor test any processed food which may contain nitrite, it can be recommended that the University Research Center may be tapped by BFAD and have a memorandum of agreement that we will be the one to analyze the nitrite content of any processed meat submitted to them.

The nitrite content of these processed meats should not be the only basis for food safety, but it is recommended that other parameters like percent fat, calorie content, and among other tests be made for awareness and food safety. It is advised to eat cured meats in moderation to prevent the bad effects of nitrite consumption. It is recommended that any food intake must be done in moderation.

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PHENOMENOLOGICAL STUDY ON INFANT CARE AMONG TEENAGE MOTHERS

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ABSTRACT

This study, using the descriptive phenomenological approach, explored the infant care experience of teenage mothers using a descriptive. Seven teenage mothers, ages 15-19 years old, were interviewed. These participants came from diverse educational, socio- economic, and geopolitical backgrounds, who were primary caregivers of their children 0-12 months old at the time of the interview and delivered termed babies without any congenital disorders regardless of the method of delivery. The interview with teenage mothers was recorded using a digital recorder and was transcribed using Hycner's (1985) method. Findings of the study showed that essence of the infant care experience of teenage mothers is characterized by four major themes: adapting to infant care routines, facing challenges in infant care, adjusting to become a teenage mother, and feeling of fulfillment of motherhood experience. These teen mothers cared for their babies with support from their families, partners and significant others. Some of them regretted becoming mothers at an early age and deprived of social life, sleep, and time for self. They desired for self-improvement and tried to manage time. They may be young, but they feel happy and fulfilled seeing their babies grow.

Keywords: *phenomenological research, infant care, teenage mothers, caregivers motherhood*

INTRODUCTION

Adolescence is often a turbulent time. Being in a period between childhood and adulthood, adolescents face some unique problems (Coon, 2002). Those who fail to develop sense of identity suffer role confusion as described by Ericson (1968). At this time, they must have identified themselves as one unique individual.

Data from the Philippine Statistical Authority (PSA, 2014) reveal that every hour, 24 babies are delivered by teenage mothers. According to the 2014 Young Adult Fertility and Sexuality (YAFS) study, around 14 percent of Filipino girls aged 15 to 19 are either pregnant for the first time or are already mothers-more than twice the rate recorded in 2002. These teenage mothers live with their mothers, parents, or relatives. In most cases, the father is usually a teenage boy. Reasons for becoming pregnant among teenagers include: unplanned sexual encounters ("getting caught up in the moment") and peer pressure; lack of information on safe sex; breakdown of family life and lack of good female role models in the family; and absence of accessible, adolescent-friendly clinics.

Unfortunately, these teenagers are not ready to become mothers. In view of this, large numbers of teenagers who plunged into unexpected pregnancies, according to Pungbangkadee (2007) face difficulties by devoting themselves to serve the needs of their infant before serving their own. As a consequence, teenage mothers face difficult conditions that can cause stress and conflict between their roles of being a teenager and being a mother.

Parents are the main caregivers of young children, the extent and quality of their parenting knowledge is often considered vital to improving children's development and health.

The purpose of the study is to examine and understand the infant-care experiences of teenage mothers who are taking care of their baby from birth up to one year. This investigation focuses on answering the central question "What is it like to care for infants as a teenage mother?"

The result of the study is expected to be beneficial to teenagers and their families, educators and health providers, policy makers and program implementers, counselors, and future researchers.

Philosophical Underpinning

The philosophy and science of caring has four major concepts: human being, health, environment/ society, and nursing, according to Jean Watson (2008).

Watson refers to the human being as "a valued person in and of him or herself to be cared for, respected, nurtured, understood and assisted; in general a philosophical view of a person as a fully functional integrated self. The human person is viewed as greater than and different from the sum of his or her parts."

Health is defined by Watson as a high level of overall physical, mental and social functioning; a general adaptive-maintenance level of daily functioning and absence of illness or the presence of efforts leading to the absence of illness.

One of the assumptions of Watson's model is that caring can be effectively demonstrated and practiced only interpersonally. Relationship management is important to teenagers and their families. Relational caring of self and others can change self, others, as well as family. According to Namit Sharma in Quora.com (2019), "the most caring person I've known till now is one and only my Mom".

METHODOLOGY

This study explored the infant care experience of teenage mothers using the descriptive phenomenological approach. The researchers of the study would like to know what it means to live as a teenage mother, most especially on how they take care of their infants. This study attempted to break from inherited understanding about infant care (e.g., from the literature, cultural conceptions, among others) and delve on the "lived experience" (Wolff, 2007 p. 97) by looking at the essential structures of the infant-care experiences among teenage mothers. This phenomenological study approached the research questions on infant-care experience of teenage mothers using Hychner (1985) notions of phenomenological research. The researchers explored infant-care experience as it presents itself in the consciousness of teenage mothers, extracted the essence of the experience, described the experience as lived experience, and attended to the nature and composition of the experience by setting aside previous understandings, preconceived judgments, and inherited theoretical ideas.

Since the researchers of this study are nurse educators who have rich theoretical ideas on infant care, these preconceived ideas, judgments, and knowledge were bracketed and consciously examined in order not to cloud the researchers' interpretation of the research participants.

This study was conducted in one of cities in the Philippines. Participants generally live in a highly urbanized and industrialized city in the Philippines. It is the capital city of the province and center of the only officially recognized Metropolitan Area in the region. Interview location and time were dependent on the participants' privacy and preference, as well as on agreement between the participants and the researchers (Holloway & Wheeler, 2010).

Eight teenage mothers served as research participants; however, seven (7) were only included in the analysis because the researchers felt that this was the saturation point. This study only included mothers who were15-19 years old and primary caregivers of their children who were 0-12 months old at the time of the interview. This study only included teenage mothers who delivered termed babies without any congenital disorders. All of them were currently enrolled in school during interview. They are living with parents and come from middle class families.

The researchers, upon initial contact, established rapport with the respondents to gain their sense of trust and to determine if they were ready for the interview. Verbal consents were sought from the participants prior to the actual interview. Written informed consents were secured prior to the commencement of the interview. They were informed of the purpose, style and procedure of the research as well as their

rights as research participants. Participants were assigned initials to ensure anonymity (Holloway & Wheeler, 2010). Hence during the interview session, the participants were encouraged to describe and express their stories freely. Each interview lasted for 30-45 minutes.

Units of general meaning of the participant's responses were identified.   Four themes, nine categories and 33 subcategories were identified describing the teenage mother's infant care experiences of their infants aging three months to 12 months old. Data processing and analysis was done using Hycner's Method (1985).

RESULTS AND DISCUSSION

Findings of the study showed that essence of the infant care experience of teenage mothers is characterized by four major themes, namely, adapting to infant care routines, facing challenges in infant care, adjusting to become a teenage mother; and feeling of fulfillment of motherhood experience.

Adapting to infant care can be described as confidence in doing infant care.   Most of these teenage mothers verbalized that they are not so confident in doing infant care; however, they were supported by their partner, mother, father and siblings.   Some of them have previous experiences in child rearing from their younger sibling or neighbor's infant such gave them the idea on how to do infant care.

Being young poses difficulty in doing infant care. Some had regrets on becoming a mother at an early age. Teen parents often find that caring for a child makes it difficult for

them to continue their schooling (Slocum 2015). They cannot go out anytime they want. They feel that they have lost their freedom and when asked what they want to tell other teenagers, they usually say, not to do what they have done. All of these young mothers want to finish their studies, find a good job in order to give their children a good future.

For those who are schooling, their children are their motivation. They experience sleepless nights, lack of sleep, they need balance things between household chores and caring for their babies. However, despite these difficulties, they still continue their studies.

Most of these teenage mothers are supported financially by their family. They are not prepared for employment, being young and schooling and with an infant to take care of. One of the mothers is not getting financial support from her family but instead her partner is solely supporting their financial needs.

Most often, they are dependent on their parents or significant others. Having a baby placed them in a situation where they are forced to learn to manage time between their baby, household chores and schooling. So far, these teen mothers try hard to balance their time.

Preparing for parenthood is important. Teenagers, too, may want to become good mothers; however, they do not actively look for information about infant care and development. (McKinney et al., 2013). They even delay their prenatal check-up, they may not know they are pregnant. Some deny that they are pregnant; they do not realize how important prenatal care is to themselves and to their baby and

to the care of their babies later on. They have little information about the physiologic needs of the body such as increase for nutrients, which pregnancy and breastfeeding impose on their bodies.

Most of the teenage mothers verbalized they became more responsible after having a baby. Most of them attended their baby's needs and also attend school at the same time.

To be a mother at this time means a more crucial time for them. They may stop schooling; they lack sleep because they take care of the baby even at night. Their social life is also deprived. Some teenagers lack time for themselves. They need extra attention and assistance to care for the baby. Health providers and parents need to provide enough guidance and health teaching.

Most teenage mothers claimed their baby made them become a better person. They were able to adjust to the routine imposed to a young mother. They are caring and loving just like any other mothers only much younger and still learning.

Motherhood has brought happiness for many of the young women. There is an associated sense of maturity and responsibility. Many young mothers have developed a personal sense of stability, identity, purpose, and responsibility following early motherhood, a finding similar to other studies of teenage pregnancy and parenthood (Ngum Chi Watts et al., 2015).

Conclusion

Based on the analysis of this study, the teenage mothers need a lot of help from parents, significant others and their partners. They also needs psychological and social help on top of the financial and material need of both the teenager and the child. Most of these teenage mothers had positive attitude of being a mother, but they face a lot of changes and challenges that have affected their lives. These girls verbalized they do not recommend early pregnancy and motherhood after the difficulties and hindrances they have encountered starting from pregnancy, delivery of their babies, and in the taking care of the baby.

Parents and significant others should advise their teenager to go back to school if possible and support them on caring for the babies.

The health provider should include family planning in their mothers' class to prevent further unplanned pregnancies, since most of them have live-in partners.

Recommendations and Implications

Parents and significant others have a great role in preventing pregnancy. An open communication between them and their children will bridge the gap between them. The teenagers listen to their parents when their parents understand and listen to them.

The health provider should include family planning in their mothers' class to prevent further unplanned pregnancies, since some of them have live-in partners. A non-judgmental

counseling program, should be provided, including all options of family planning and safe sex.

Adolescents should be taught sexuality at school and the responsibility that goes with it. The value of education should be reinforced.

Advocacy for evidence-based programs to support teenage mothers should be encouraged. They need financial support for their laboratories, medicines, and ultrasound.

Young mothers should be encouraged to return to school and continue a healthy lifestyle. Nutritional adequacy, particularly of breastfeeding mothers, should be assessed.

Young pregnant woman should likewise be encouraged to get appropriate healthcare intervention, including non-judgmental medical and psychosocial support. It will provide a good outcome for both the young parent and the child. Teenage fathers can also participate in the care of their partner and the baby.

This study may also encourage future researchers to conduct further related studies. This may also serve as their source of ideas, concepts, and reference for further studies.

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AWARENESS, AVAILMENT, ASSESSMENT AND IMPORTANCE OF STUDENT SERVICES

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ABSTRACT

This descriptive-relational study was conducted to determine the awareness, availment, assessment, and importance of student services among the 361 students of Central Philippine University during the School Year 2018 - 2019. A revised duly validated and reliability tested questionnaire was used and ethical considerations for the study were followed. Data were analyzed using frequency count, percentages, Chi Square, Cramer's V, and Gamma. The findings are: the profile of the respondents shows that there are more females than males; younger group; Roman Catholics; first and fourth year students from the Colleges of Business and Accountancy, Engineering and Arts and Sciences; coming from barangays; graduated from either public or private high schools either located in the cities or towns; and are living with their parents in their own house while studying in the university. The respondents are very much aware of the existence of the student services and programs of the university during the two school years of the survey (2015 and 2018); have attached a great value upon the existence of these student services and programs in the university; are aware and have availed of the services and programs under the VPSA. Based on the

findings of the study, the following conclusions are drawn: the respondents' place of origin is significantly related to the importance they attach to *student* services and programs in general of the university. The respondents' awareness of student services and programs under the Office of the Vice President for Student Affairs is significantly related to their availment and assessment of these services and programs.

INTRODUCTION

It is the mandate for all higher education institutions (HEIs) like Central Philippine University to protect and promote the rights of all Filipino citizens to quality education at all levels and shall take appropriate steps to make education accessible to all (Philippine Constitution, 1987) and that the state shall establish, maintain and support a complete, adequate, and integrated system of education relevant to the needs of the people and society (CHED Memorandum Order No. 09, Series of 2013). It is stated in this memorandum that the Student Affairs and Services are the services and programs in higher education institutions that are concerned with academic support experiences of students to attain holistic student development. This is the office that is devoted to creating an integrated learning experience that will help students reach their educational, social, personal, and professional aspirations. In consonance with the institution's vision, mission, it aims to provide occasions for growth and advancement through cultural, spiritual, athletic, co-curricular, and extra-curricular activities with the end in view that students may develop into well-rounded individuals. It endeavors to nurture a campus environment where academic and non-academic pursuits are balanced thereby making campus life more enriching, interesting, and worthwhile for students (http://www.cefi.edu.ph/index.php?option=com content&view=article&id=78&Itemid=82 as cited by Java, 2015).

Central Philippine University has been known as a university purposed to provide Exemplary Christian Education for Life which will be responsive to the needs of the total person and the world and offer a holistic education for her

students (Java, 2015). Are the students aware of these student services and programs? Can they feel these programs? Are they availing them? If so, to what extent are they availing them? Yes, because students come and go every year and may have varying experiences regarding the reach of the student services of the university. However, in order that the results of this study could be used for management review, there is a need to conduct such study every two years. Hence, this study was conducted.

Objectives and Hypotheses of the Study

This study was conducted to determine the awareness, availment, assessment and importance of student services among students of Central Philippine University. Specifically, this study aimed to:

1. describe the profile of the respondents as to age, sex, college, religion, type of high school graduated from, place of high school graduated from, place of residence, and living arrangement while in school;

2. determine the respondents' awareness and assessment of the importance of the student programs and services offered by the university and the offices/services under the Office of the Vice President for Student Affairs;

3. determine the respondents' availment and assessment of the offices/services under the Office of the Vice President for Student Affairs;

4. determine the relationship between the respondents' profile and awareness of student programs and services;

5. determine the relationship between the respondents' awareness of the offices/services under the

Office of the Vice President for Student Affairs and their availment, assessment and importance of these offices/services;

6. determine the relationship between the respondents' availment of the offices/services under the Office of the Vice President for Student Affairs and their assessment and importance of these offices/services; and

7. determine the relationship between the respondents' assessment of the offices/services under the Office of the Vice President for Student Affairs and the importance of these offices/services.

Hypotheses of the Study

Based on the objectives given, it was hypothesized that:

1. there is a significant relationship between the respondents' profile and awareness of student programs and services;

2. there is a significant relationship between the respondents' awareness of the offices/services under the Office of the Vice President for Student Affairs and their availment, assessment and importance of these offices/services;

3. there is a significant relationship between the respondents' availment of the offices/services under the Office of the Vice President for Student Affairs and their assessment and importance of these offices/services; and

4. there is a significant relationship between the respondents' assessment of the offices/services under the Office of the Vice President for Student Affairs and the importance of these offices/services.

Theoretical/Conceptual Framework and Hypotheses

This study was anchored on the Contingency Approach of Luthans (2008) and the Individual Differences in psychology by Newstrom (2007).The "Contingency Approach" contends that certain practices work better than others for certain people and certain jobs while individual differences in psychology states that people differ in their personalities, needs, demographic factors, past experiences, or even find themselves in different physical settings, time periods, or social surroundings (Bedia, 2012) as cited by Java (2015).

According to Luthans (2008), clients' expectations are highly individualized by age, gender, personality, occupation, location, socio-economic class, past experiences and many other factors. Older clients may tend to have higher awareness   and availments of services than younger clients because they are more responsible and reliable. Female clients may have greater awareness and availment of services than the male clients because they are more interested in their work (Bedia, 2012) as cited by Java (2015).

There are several factors that may contribute to clients' satisfaction with quality of services, such as, awareness and availment of services and extent of utilization and satisfaction of these services. If the clients are aware and avail of these services, the level of satisfaction and their assessment may tend to be higher than those who are not aware and have not availed at all. Likewise, clients who have availed and utilized these services may have high level of satisfaction and assessment of these than those who have not.

Clients may differ in the way they are satisfied depending on their access to the services and their utilization of them. One may have satisfaction, with the access to these services, but may be dissatisfied if he or she had already utilized them. This observation is in accord with the law of individual differences in psychology, upholding a belief that all people are different from all others. People differ in their personalities, needs, demographic factors, past experiences, or even find themselves in different physical settings, time periods, or social surroundings" (Newstrom 2007) as cited by Java (2015).

In line with these discussions, it could be deduced that the respondent's age, sex, religion, college, place of origin, type of high graduated from, place of high school graduated from, living arrangement while in school, which are considered as antecedent variables, may influence his/her awareness and importance of student services, as well as his/her awareness, availment, assessment and importance of offices/student services and programs under the Office of the Vice President for Student Affairs which are considered to be the independent and dependent variables respectively.

To further illustrate the interplay of the variables in the study, the following diagram is presented to show the relationship of the variables in the study:

Antecedent Variables   **Independent Variables**   **Dependent Variables**
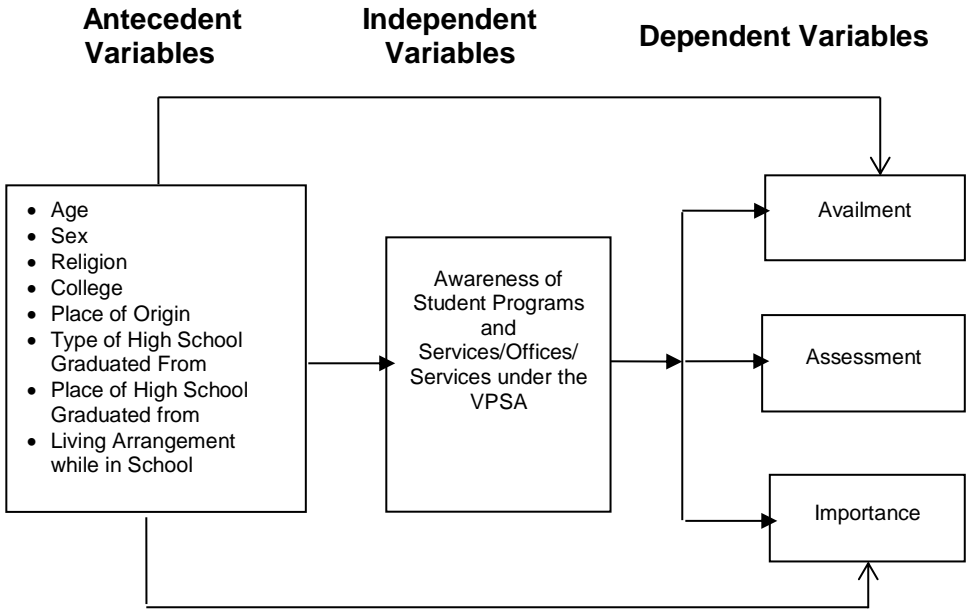
Figure 1. Schematic Diagram of the study showing the relationship among the different variables.

Significance of the Study

The result of the study will be valuable to the following sectors: Office of the Vice President for Student Affairs, Colleges, Administration and Researchers. Data gathered from this research will be valuable to the office of the Vice President for Student Affairs to know the awareness, availment, assessment, and importance of the different student services and programs under it. The information gathered will provide the colleges a glimpse of how their students are availing of the different student services. Data collected can provide an assessment of the services provided by the university through this office and how these had impacted the students. Hence, the results can serve as an

indicator of how the administration is implementing these services and in turn how these can help the university realize her vision, mission, and goal. Other groups or individuals may benefit from the data gathered by getting inspiration to conduct their own study for their institutions or use this as springboard for further and detailed studies.

Scope, Limitations and Applicable Definitions of the Study

This study focused on the awareness, availment, assessment, and importance of student services obtained through one-shot survey using a researcher-made questionnaire administered in the SEAL classes of the college freshmen-respondents while those in the higher years were contacted either through their classes or by using all means of communication like Facebook, Yahoo Messenger, text message or through their classmates and friends. Second coursers like those enrolled in the Colleges of Law, Medicine and Graduate Studies and Bachelor of Science in Respiratory Therapy, who are having their OJT in Manila were excluded as respondents of the study.

The following are the operational definition of terms as used in this research:

Awareness of student services. This refers to the students' knowledge of the existence of the different student services and programs available to students in the university. This was measured by the 20-item questions answerable by yes or no. Each yes answer gets one point. Based on the total number of yes responses, the respondent's awareness of student services can be classified as "high" (14 – 20), "average" (7 – 13), and "low" (0 – 6) or "no" answers (0). In

the case of awareness of offices/services under the VPSA, this was measured by a 10-item questions answerable by yes or no. Each yes answer gets one point. Based on the total number of yes responses, the respondent's awareness of student services under the VPSA can be classified as "high" (8 - 10), "average" (5 – 7), and "low" (0 – 4) or "no" answers (0).

Availment of Student Services under the VPSA . This refers to the number of times the students had benefited from the student services and programs offered by the University through the office of the VPSA. The availment of student services and programs was determined by the total "availed" response the respondents answered out of the 10-item instrument.   Based on the total number of "availed" responses, the respondent's availment of student services and programs are classified as "high" (8 – 10), "average" (5 – 7), and "low" (0 – 4) or "no" answers (0).

Assessment of Student Services and Programs under the VPSA. This refers to the students' level of contentment with the utilization/availment of student services and programs offered by the University through the Office of the VPSA. The level of satisfaction with student services and programs was measured by the 10-item instrument using the following responses: definitely satisfied – 5; satisfied – 4; neither satisfied nor dissatisfied – 3; dissatisfied – 2; and definitely dissatisfied – 1.   The average measure was computed and based in the obtained value; the respondents' level of satisfaction with student services and programs was categorized as follows: Definitely Satisfied =41 – 50; Satisfied = 31 – 40; Neither Satisfied or Dissatisfied =21 – 30; Dissatisfied =11 – 20; and Definitely Dissatisfied =1- 10.

   Importance of student services. This refers to the value the student will attach to student services and programs in his/her life as a student. This was measured by the 20-item questions answerable by the following: very important – 5; important – 4; neither important nor unimportant – 3; not important – 2; and, not at all important – 1. The total answer was added and was given the following categories: Very Important = 81 – 100; Important = 61 – 80; Neither Important or Unimportant = 41 – 60; Not Important =21 – 40; and Not at all Important=1 – 20.

   In the case of importance of offices/services under the VPSA, this was measured by a 10-item question answerable by the following: very important – 5; important – 4; neither important nor unimportant – 3; not important – 2; and not at all important – 1. The total answer was added and was given the following categories: Very Important = 41 – 50; Important = 31 – 40; Neither Important or Unimportant = 21 – 30; Not Important =11 – 20; and Not at all Important =1 – 10.

   The definition of the following terms/phrases: student services, orientation service, guidance service, placement services, student organizations, leadership training, student government, student discipline, admission services, scholarship and financial assistance, food services, health services, safety and security services, student housing and residential services, international student services, services for student with special needs and personal with disabilities, cultural and arts program, sports development programs and social and community involvement programs were adapted from CHED Memo No. 09, Series of 2013.

Related Literature/Studies

Many studies have been conducted about student services in general, and about the awareness, availment, assessment and importance of these services in particular. Reviewed in this section are some studies which have direct bearing on the present study on awareness, availment, assessment and importance of student services.

According to Berstein and Cunanan (2008), and Bedia (2012) effective access to services must be drawn from all resources of the school community, be made available to all students, and provided to meet their basic need. Provision of these services must be coordinated to ensure that all students receive the necessary services. However, students have various expectations in terms of quality of services provided by the university. If students' expectations are met, delivery of service can be perceived to be satisfactory. On the other hand, there are several factors that may contribute to students' satisfaction with quality of services offered to them such as awareness and access to the services and the extent of utilization/availment of these services. If the students have access to or are aware of these services, the level of satisfaction may tend to be higher than those who have no access at all. Similarly, students who have utilized these services may have a higher level of satisfaction than those who have not (Java, 2015).

Moreover, satisfaction according to Deming (Sallie, 1998 in Bedia, 2012 as cited by Java, 2015) is the measure of quality of services. The satisfaction levels of clients largely depend on how the services are provided to them in terms of quality. In case of client evaluations, Stipak (2001) in Bedia

(2012) as cited by Java (2015) had pointed out that the accuracy of client perception of service conditions can be affected by some factors like the degree of interaction between the agency and the clients, and other client variables and experiences. Clients can also be more satisfied if they participate in the evaluation of the services provided by the institution. They may differ in the way they are satisfied depending on their access to the services and on how they utilize these services. One may have satisfaction, with the access to these services, but may be dissatisfied if he or she had already utilized them. In the same manner, a study conducted by Roxas (2003), and Cortel (2004) as cited by Java (2015) yielded a result that all of the units of student services including guidance office fall short of the expectation of students.

METHODOLOGY

This is a descriptive-relational study. A one-shot survey design was used to answer the objectives of the study. The study area and the study population included the 6,938 college students of Central Philippine University for the First Semester of School Year 2018- 2019 excluding the students enrolled in Medicine Proper, College of Law and School of Graduate Studies who are already second coursers. The computed sample size is 364 but the final sample size was 361 for the BS Respiratory Therapy students could not be reached while they were having their OJT in Manila during the conduct of the study.

RESULTS AND DISCUSSION

Profile of Respondents as to age, sex, college, religion, year level, place of origin, type and place of high school graduated from and living arrangement while studying at CPU.

The profile of the respondents according to age, sex, college, religion, year level, place of origin, type and place of high school graduated from and living arrangement while studying at CPU is presented in Table 1**.** In terms of their age, more than four-fifths are aged 20 years old and younger (82.5%) while less than   two-fifths are aged 21 years old and older (17.5%) Their mean age is 19.72 years. These data support the results of the same study conducted in 2015 wherein there are more young respondents compared to the older ones and also the study of Java and Java (2015) while contradicts the findings of the study of Java, et. al (2018) wherein majority of their respondents belonged to the older group . In terms of their sex, the data show that the females are twice more than the males (67.0% vs. 33.0%) just like the ratio during the conduct of the study in 2015 (77.3% vs. 22.7%).These data in terms of their sex, wherein there are more females than males are in consonance with the findings of Java, et. al. (2018) in their study about student leaders; Java and Java (2015) in their study with regards to awareness of CPU students, attitudes towards and involvement in spiritual programs; Java (2014) in her study with regards to CPU entrance scholars and Aberia and Java (2011) in their study about employability of graduates of CPU. As to religion, a greater majority are Roman Catholic (76.7% vs. 72.6% in the previous study in 2015) and a little over one fifth (23.3% vs. 22.7% in the previous study in 2015) are Protestant composed of different Baptist denominations and

other religions such as Baptists, Born Again, Latter Day Saints, Seventh Day Adventist, Aglipay, Iglesia ni Kristo, and Islam.

As to the college of the respondents belong to the top three of the colleges where they belonged are: Business and Accountancy (25.5%); Engineering (13.9%) and Arts and Sciences (11.9%) which is in consonance with the data of the findings of Java (2014) wherein the biggest chunk of the respondents (entrance scholars) came from the College of Business and Accountancy.

As to year level, there is an equal number of respondents from the first year and fourth year group (42.9% each respectively) which gives a true picture of the effect of the implementation of the K-12 program. As to place of origin, majority (77.0%) of them came from barangays which was quite different from the previous survey conducted (47.3%). As to type of high school graduated from, more or less there is the same number of respondents from public high school and from private high school (public = 47.1% vs. private = 42.9%). These data that show that most of the respondents' type of high school graduated from are public high schools are in agreement with the findings of Java and Java (2015) and Java (2014), wherein most of the respondents who participated in the study on spirituality and entrance scholars were graduates of public high schools.

As to the location of high school graduated from, the data reveal that there is a little disparity in the number of respondents who graduated from high schools either located in the cities (44.9%) or towns (43.8%) while a little over one-tenth of them (11.4%) graduated from high schools located in

barangays. This location of the high school where the respondents graduated from is a reflection also of the type of high school where they came from. Again, these data are in consonance with the findings of the previous study on student services of Java (2015) and Java and Java (2015) in their study, wherein almost the same number of respondents graduated from high schools either located in the cities or towns while almost one-tenth of them graduated from high schools located in barangays.

As to living arrangement while studying at CPU, a little over one-half of the respondents are living with their parents in their own house (52.6%), less than one-fourth of them are either staying in boarding houses or living with relatives (17.7% vs. 12.2%). This result is also in consonance with the findings of Java (2015) in her previous study regarding student services and of Java and Java (2015) regarding the living arrangement while studying at CPU of those student-respondents who participated in their study.

Table 1. Distribution of Respondents as to age, sex, college, religion, year level, place of origin, type and place of high school graduated from and living arrangement while studying at CPU. (**fix)**

Profile/Categories	f	%
Age		
20 and below	298	82.5
21 and above	63	17.5
Total	**361**	**100.0**
Mean Age = 19.72		
Sex		
Male	119	33.0
Female	242	67.0
Total	**361**	**100.0**
Religion		
Baptist	49	13.6
Roman Catholic	277	76.7
Born Again	16	4.4
Aglipay	3	0.8
Iglesia ni Kristo	6	1.7
Adventist	7	1.9
Latter-Day Saints	2	0.6
Islam	1	0.3
Total	**361**	**100.0**
College		
Agriculture	12	3.3
Arts and Sciences	43	11.9
Business and Accountancy	92	25.5
Computer Studies	35	9.7
Education	22	6.1
Engineering	50	13.9

Table 1 continued.

Profile/Categories	f	%
College		
Hospitality Management	35	9.7
Nursing	29	8.0
Theology	2	0.6
Pharmacy	16	4.4
Medical Laboratory Science	25	6.9
Total	**361**	**100.0**
Year Level		
First Year	155	42.9
Second Year	7	1.9
Third Year	31	8.6
Fourth Year	155	42.9
Fifth Year	13	3.6
Total	**361**	**100.0**
Place of Origin		
Barangay	278	77.0
Town	49	13.6
City	34	9.4
Total	**361**	**100.0**
Type of High School Graduated from		
Public	170	47.1
Private	155	42.9
State College/University	36	10.0
Total	**361**	**100.0**
Place of High School Graduated From		
Barangay	41	11.4
Town	158	43.8
City	162	44.9
Total	**361**	**100.0**
Living Arrangement while in School		
Own House	190	52.6
Apartment	33	9.1
Living with Relatives	44	12.2
Boardinghouse	64	17.7
Dormitory	22	6.1
Living with Other people	2	0.6
Others	4	1.1
Combination	2	0.6
Total	**361**	**100.0**

Awareness of Student Services and Programs in General

The data in Table 2 provide an affirmation that the students are very much aware of the presence or existence of the twenty different student services and programs of the university through the years. Looking closely at their scores reveal that majority of them are aware of all twenty different student services and programs offered by the University (lowest is Services for Student with Special Needs and Persons with Disabilities = 73.4% in 2015 and Chaplaincy Program = 82.3% in 2018 and highest is Health Services = 97.4% in 2015 and Orientation Services = 96.7% in 2018). The top student services and programs that the respondents are aware of at present (2018) and in 2015 are: Orientation Services (96.7% vs. 97.1%); Safety and Security Services (96.4% vs. 97.7%) and Admission Services (95.8% vs. 96.1%).

The services and programs which received the lowest percentages of awareness among the respondents in 2015, namely, Services for Students with Special Needs and Persons with Disabilities and International Student Services had increased in 2018 (26.6% vs. 16.9% and 12.3% vs. 10.8% respectively for those students who are not aware of these services).

Again, this result is an affirmation of the finding that every service that the student services office provides must be visible and accessible to every individual student within the campus (Bedia, 2012).

Table 2.Comparison of the Students' *Awareness of Student Services and Programs in General for two School Years (2015 and 2018)*

Student Services and Programs	Aware				Not Aware			
	2015		2018		2015		2018	
	f	%	f	%	f	%	f	%
Admission Services	368	96.1	346	95.8	15	3.9	15	4.2
Chaplaincy Program	338	88.3	297	82.3	45	11.7	64	17.7
Cultural and Arts Programs	346	90.3	326	90.3	37	9.7	35	9.7
Food Services (Dining Hall)	361	94.3	319	88.4	22	5.7	42	11.6
Guidance Services	353	92.2	337	93.4	30	7.8	24	6.6
Health Services	373	97.4	330	91.4	10	2.6	31	8.6
International Student Services	308	80.4	312	86.4	75	19.6	49	13.6
Leadership Training	336	87.7	322	89.2	47	12.3	39	10.8
Orientation Services	372	97.1	349	96.7	11	2.9	12	3.3
Placement Services	325	84.9	298	82.5	58	15.1	63	17.5
Safety and Security Services	374	97.7	348	96.4	9	2.3	13	3.6
Scholarships and Financial Assistance	352	91.9	341	94.5	31	8.1	20	5.5
Services for Students with Special Needs and Persons with Disabilities	281	73.4	300	83.1	102	26.6	61	16.9
Social and Community Involvement Programs	338	88.3	319	88.4	45	11.7	42	11.6
Sports Development Programs	359	93.7	332	92	24	6.3	29	8
Student Discipline	366	95.6	339	93.9	17	4.4	22	6.1
Student Government (CPUR)	371	96.9	342	94.7	12	3.1	19	5.3
Student Housing and Residential Services	326	85.1	300	83.1	57	14.9	61	16.9
Student Organizations	356	93	342	94.7	27	7	19	5.3
Student Publication	367	95.8	329	91.1	16	4.2	32	8.9

Importance of Student Services and Programs in General

The data in Table 3 show that the respondents have attached a great value on the presence or existence of the twenty different student services and programs in the university during the surveys conducted in 2015 and 2018 (Overall Mean = 4.53 (2015); 4.57 (2018) . The top three student services and programs that the respondents have attached great value and importance to are: Safety and Security Services (very important = 82.3% (2018), and 77.0% (2015) and mean score = 4.72 versus 4.80;Health Services (very important = 77.6% (2018) and 74.2% (2015) and mean score = 4.64 versus 4.74; and Orientation Services (very important = 75.9% (2018), and 77.3% (2015) and mean score = 4.75 versus 4.73. Although they have also attached great value or importance to the presence of International Student Services (Very important = 49.3% (2018), and 42.3% (2015)) and Student Housing and Residential Services (very important = 49.6% (2018), and 46.0% (2015), the percentages of these are quite low compared to the value they had attached to the other services and programs.

There are very minimal decreases in the mean score of importance of the following student services and programs, namely: Chaplaincy program (from 4.54 to 4.50), Orientation services (from 4.75 to 4.73), Placement services (from 4.57 to 4.33), Social and community involvement programs (from 4,48 to 4.47),Student government   (from 4.53 to 4.47), Student organizations (from 4.49 to 4.47). The minimal drop in their mean scores in these student services and programs may be explained by the fact that there was a recess of having freshmen for two school years because of the implementation of the K-12 program and also because the respondents for the

year 2018 involved the sample from the whole population, that is, from first year until fourth year unlike in the year 2015, wherein the respondents were all graduating students.

Overall, it could be said that these results simply show that students, through the years, still give importance to and value their safety and security, and health by the values they had attached to these program and services. Moreover, that they believed that there is a need for them to be aware of all these programs and services that is why they had attached also a high value to the orientation services, wherein through this service, they will be made aware of all these programs and activities.

Availment of Offices/Student Services and Programs under the Vice President for Student Affairs (SY 2018 – 2019)

The data presented in the Table 5 show the availment of the respondents of the services and programs under the Vice President for Student Affairs. The data show the student services and programs which are meant for all students were availed by the students, namely: Guidance Services Center (82.3%); Medical Clinic (82.0%); Clinical Laboratory (77.3%); and Swimming Pool (75.1%). However, the Dental Clinic which is meant for all students were availed by a little less than two-fifths of the studentry
(38.0%).

The other services and programs were availed by more or less one-fourth to around three fifths of the students because of the nature of their service or program which is not meant for all students. For example, Dormitories (25.8%) is not meant for all for the dormitories of the university cannot cater to all students. Thus, there is a need for the university to build state of the art dormitories which could accommodate many students. The Sports and Athletics (43.5%) also caters only to the athletes of the university, thus, all other students are not aware of its services. The Career and Placement Office is meant to help the graduating students or graduates of the university, hence, underclassmen of the university are not aware of its services also. Student Discipline (48.8%) caters to those students who have done mistakes and meant for the security of the students, hence, if a student is a law-abiding citizen, he/she will not come into contact with this office or program.   Student Development and Programs caters most likely to scholars and student-leaders, hence, if a

student does not qualify under this banner, he/she may not be able to experience the services and programs of this office.

These results show that there is a need to increase students' awareness of these services and programs so that they can avail of them or tell other students about the existence of these services and programs so that if they need them they can avail of them.   Again, this result validates Bedia's (2012) statement that "*every service that the student services office provides must be visible and accessible to every individual student within the campus".* This also conforms to Bedia's findings (2012) wherein there is also low extent of utilization or availment of guidance services of STI among his respondents.

Table 5. Respondents' Availment of Offices/Student Services and Programs under the Vice President for Student Affairs (SY 2018-2019)

Availment of Offices/Student Services and Programs under Vice President for Student Affairs	Availed		Not Availed	
	f	%	f	%
Guidance Services Center	297	82.3	64	17.7
Student Development and Programs	214	59.3	147	40.7
Swimming Pool	271	75.1	90	24.9
Dental Clinic	137	38.0	224	62.0
Medical Clinic	296	82.0	65	18.0
Dormitories	93	25.8	268	74.2
Career Placement Office	162	44.9	199	55.1
Sports and Athletics	157	43.5	204	56.5
Clinical Laboratory	279	77.3	82	22.7
Student Discipline	176	48.8	185	51.2

*Assessment of Offices/Student Services and Programs
under Vice President for Student Affairs*

The assessment of offices/student services and programs under the VPSA is found in Table 6. The data show that around one-fifth to more than two-fifths of the respondents were not able to avail of the offices/student services and programs under the VPSA (Guidance Services Center = 17.7% and Dormitories = 74.2%). It follows that one cannot assess what one had not availed of. However, for those who had availed and had assessed these services and programs, the net score of the degree of satisfaction of their availment of these offices/student services and programs under the VPSA ranged from 75.1% of the Medical Clinic) up to 91.6% of the Student development and programs which are all higher than 70.0% which is equivalent to excellent. This means that all the respondents, regardless of the degree of satisfaction of their availment of these services and programs under the VPSA, felt than they were satisfied of all the services they had availed of. The two offices that received barely 75.0% net score of satisfaction are: Medical Clinic (75.1%) with 4.4% or 13 respondents who were dissatisfied and 8.0% or 29 respondents who were neither satisfied nor dissatisfied of its services and Swimming Pool (75.5%) with 3.4% or 12 respondents who were dissatisfied and 8.9% or 32 respondents who were neither satisfied nor dissatisfied of its services. A close look of the comments and suggestions for these offices which had incurred below 76.0% net score of satisfaction prove that something should be done by the management about these services. Some of the comments and suggestions for the Medical Clinic are as follows: "*improve their services*", "*the doctors and working students should be more friendly, approachable and polite, and not*

grumpy and rude". Some of the negative comments and feedbacks regarding the Swimming Pool are as follows: *"the staff should be more approachable and not so strict", facilities must be improved and maintained like locker rooms, bathroom and comfort room", "maintain cleanliness of the pool and surrounding area."*

Once again, these results prove that there is a need to increase students' awareness of these services and programs so that they can avail of them or tell other students about the existence of these services and programs so that if they need them they can avail of them which was the findings of Bedia (2012) and that they will be satisfied of their availment of such services.

Table 6. Respondents' Assessment of Offices/Student Services and Programs under Vice President for Student Affairs

Assessment of Offices/Student Services and Programs under Vice President for Student Affairs	NA		Definitely Dissatisfied		Dissatisfied		Neither Satisfied nor Dissatisfied		Satisfied		Definitely Satisfied		Net Score for Satisfaction %
	f	%	f	%	f	%	f	%	f	%	f	%	%
Guidance Services Center	64	17.7			1	0.3	15	4.2	97	26.9	184	51.0	91.1
Student Development and Programs	147	40.7			1	0.3	14	3.9	69	19.1	130	36.0	91.6
Swimming Pool	90	24.9	2	0.6	10	2.8	32	8.9	114	31.6	113	31.3	75.5
Dental Clinic	224	62.0	1	0.3	2	0.6	26	7.2	41	11.4	67	18.6	83.9
Medical Clinic	65	18.0	4	1.1	12	3.3	29	8.0	91	25.2	160	44.3	75.1
Dormitories	268	74.2	2	0.6	3	0.8	16	4.4	38	10.5	34	9.4	88.3
Career Placement Office	198	54.8			2	0.6	16	4.4	62	17.2	83	23.0	90.0
Sports and Athletics	203	56.2	1	0.3	6	1.7	16	4.4	65	18.0	70	19.4	87.2
Clinical Laboratory	81	22.4	3	0.8	6	1.7	28	7.8	99	27.4	144	39.9	79.4
Student Discipline	184	51.0	2	0.6	2	0.6	15	4.2	60	16.6	98	27.1	76.9

Assessment of Importance of Offices/Student Services and Programs under Vice President for Student Affairs

The assessment of the importance of offices/ student services and programs under the Vice President for Student Affairs is found in Table 7. It could be seen in the data that all the respondents had attached great importance to all the offices/ student services and programs under the Vice President for Student Affairs (combined Important and Very Important rating ranges from 88.6% for the Dormitories and the highest is Guidance Services Center, 98.4%). It followed that among the offices/student services under the VPSA, some of the respondents felt that the dormitories again are not that important (combined percentage of not at all important, not important and neither important or unimportant is 11.3% or a total of 41 students out of the 364 respondents). Moreover, the net score of the degree of importance of the presence of the offices/student services and programs under the VPSA ranged from 77.3% of the Dormitories) up to 96.7% of the Guidance Services Center which are all higher than 70.0% which is equivalent to excellent. This means that all the respondents, regardless of the degree of importance they had attached to these services and programs under the VPSA, felt than these are all important in their lives.

Table 11. Respondent's Assessment of Importance of Offices/Student Services and Programs under Vice President for Student Affairs

Importance of Offices/Student Services and Programs under Vice President for Student Affairs	Not at All Important		Not Important		Neither Important or Unimportant		Important		Very Important		Net Score of Importance
	f	%	f	%	f	%	f	%	f	%	%
Guidance Services Center					6	1.7	45	12.5	310	85.9	96.7
Student Development and Programs			1	0.3	9	2.5	58	16.1	293	81.2	94.5
Swimming Pool			3	0.8	27	7.5	108	29.9	223	61.8	83.4
Dental Clinic			3	0.8	21	5.8	76	21.1	261	72.3	86.8
Medical Clinic	2	0.6	1	0.3	10	2.8	55	15.2	293	81.2	92.7
Dormitories	3	0.8	3	0.8	35	9.7	99	27.4	221	61.2	77.3
Career Placement Office	1	0.3	1	0.3	22	6.1	96	26.6	241	66.8	86.7
Sports and Athletics	2	0.6			28	7.8	98	27.1	233	64.5	83.2
Clinical Laboratory	1	0.3			10	2.8	66	18.3	284	78.7	93.9
Student Discipline	1	0.3	1	0.3	14	3.9	56	15.5	289	80.1	91.1

Respondents' Awareness and Availment of Student Services and Programs under the Office of the Vice President for Student Affairs

The relationship between the respondents' awareness of student services and programs under the Office of the VPSA and their availment of these programs is found in Table 8. The data show that those respondents who have high level of awareness of student services and programs also have high availment of these services and programs. This truth is supported by the Gamma test of association between these two variables which yielded the value of 0. 601 with p value of 0.000 which is significant. Hence, it could be said that those who have high awareness of the presence of student services and programs under the office of the Vice President for Student Affairs of the university are more likely to have high availment of such programs and services.

Table 8. Relationship Between Respondents' Awareness
and Availment of the Offices/Student Services and Programs
under the Vice President for Student Affairs

Awareness of Offices/Student Services and Programs under VPSA	Availment of Offices/Student Services and Programs under Vice President for Student Affairs							
	High		Average		Low		Total	
	f	%	f	%	f	%	f	%
High	97	29.9	129	39.8	98	30.2	324	100.0
Average	1	3.2	14	45.2	16	51.6	31	100.0
Low					6	100.0	6	100.0
Total	**98**	**27.1**	**143**	**39.6**	**120**	**33.2**	**361**	**100.0**

Gamma = 0.601   p = 0.000   Significant

*Respondents' Awareness and Assessment of Student
Services and Programs under the Office of the Vice
President for Student Affairs*

The relationship between the respondents' awareness
of student services and programs under the office of the VPSA
and their assessment of these programs is found in Table 9.
The data show that those respondents who have high level of
awareness of student services and programs under the office
of the VPSA also have very good or definitely satisfied
assessment of these services and programs. This truth is
supported by the Gamma test of association between these
two variables which yielded the value of -0.983 with p value of
0.000 which is significant. Hence, it could be said that those
who have high awareness of the presence of student services
and programs under the office of the VPSA of the university
are more likely to have very good assessment or are definitely
satisfied of such programs and services.

Table 9. Relationship Between Respondents' Awareness and Assessment of the Offices/Student Services and Programs under the Vice President for Student Affairs

Awareness of Offices/Student Services and Programs under Vice President for Student Affairs	Assessment of Offices/Student Services and Programs under Vice President for Student Affairs											
	Definitely Dissatisfied		Dissatisfied		Neither Satisfied nor Dissatisfied		Satisfied		Definitely Satisfied		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
High			2	2.0	3	3.1	35	35.7	58	59.2	98	100.0
Average	1	0.7	30	21.0	101	70.6	11	7.7			143	100.0
Low	42	35.0	78	65.0							120	100.0
Total	43	11.9	110	30.5	104	28.8	46	12.7	58	16.1	361	100.0

Gamma = -0.983   p = 0.000   Significant

Respondents' Awareness and Importance of Student Services and Programs under the Office of the Vice President for Student Affairs

The relationship between the respondents' awareness of student services and programs under the Office of the VPSA and the degree of importance they attach to these programs is found in Table 10. The data show that those respondents who have high level of awareness of student services and programs under the office of the VPSA also have attached high importance to the presence of these services and programs in the university. However, this truth is not supported by the Gamma test of association between these two variables which yielded the value of 0.388 with p value of 0.146 which is not significant. Hence, it could be said that regardless of the degree of awareness, be it high, average or low, of the respondents of the presence of student services and programs under the office of the VPSA of the university, they are more likely to attach high importance to the presence of such programs and services in the university.

Table 10. Relationship between Respondents' Awareness and Assessment of Importance of the Offices/Student Services and Programs under the Vice President for Student Affairs

Awareness of Offices/Student Services and Programs under VPSA	Importance of Offices/Student Services and Programs under Vice President for Student Affairs							
	Neither Important or Unimportant		Important		Very Important		Total	
	f	%	f	%	f	%	f	%
High	3	0.9	26	8.0	295	91.0	324	100.0
Average			6	19.4	25	80.6	31	100.0
Low			1	16.7	5	83.3	6	100.0
Total	**3**	**0.8**	**33**	**9.1**	**325**	**90.0**	**361**	**100.0**

Gamma = -0.388   p = 0.146   Not Significant

Respondents' Availment and Assessment of Student Services and Programs under the Office of the Vice President for Student Affairs

The relationship between the respondents' availment of student services and programs under the office of the VPSA and their assessment of their satisfaction of these services and programs is found in Table 11. The data show that those respondents who have high level of availment of these student services and programs under the office of the VPSA are definitely satisfied of these services and programs offered in the university. This truth is supported by the Gamma test of association between these two variables which yielded the value of 0.983 with p value of 0.000 which is significant. Hence, it could be said that those who have high availment of these student services and programs under the office of the VPSA of the university are more likely to be definitely satisfied of the presence of such programs and services in the university. This finding is supported by the relationship

between their awareness of these services and programs and their availment of these as well by the relationship between their awareness and assessment of these services which are all significant. Indeed, it follows that those respondents who were aware of these services and programs can avail of them and can assess them more positively.

Table 11. Relationship Between Respondents' Availment and Assessment of the Offices/Student Services and Programs under the Vice President for Student Affairs

Availment of Offices/Student Services and Programs under Vice President for Student Affairs	Assessment of Offices/Student Services and Programs under Vice President for Student Affairs										
	Definitely Dissatisfied		Dissatisfied		Neither Satisfied nor Dissatisfied		Satisfied		Definitely Satisfied		Total
	f	%	f	%	f	%	f	%	f	%	f	%
High			2	2.0	3	3.1	35	35.7	58	59.2	98	100.0
Average	1	0.7	30	21.0	101	70.6	11	7.7			143	100.0
Low	42	35.0	78	65.0				12.7			120	100.0
Total	43	11.9	110	30.5	104	28.8	46	16.1	58	16.1	361	100.0

Gamma = -0.983   p = 0.000   Significant

Respondents' Availment and Importance of Student Services and Programs under the Office of the Vice President for Student Affairs

The relationship between the respondents' availment of student services and programs under the Office of the VPSA and their assessment of their satisfaction of these services and programs is found in Table 12. The data show that those respondents who have high level of availment of these student services and programs under the office of the VPSA are definitely satisfied of these services and programs offered in the university. However, this truth is not supported by the Gamma test of association between these two variables which yielded the value of -0.092 with p value of

0.512 which is not significant. Hence, it could be said that regardless of the degree of availment, be it high, average or low, of the respondents of these student services and programs under the office of the VPSA of the university, they are more likely to attach high importance to the presence of such programs and services in the university. This finding is being supported by the relationship of the respondents' awareness of these student services and programs and the importance they have attached to this which is not significant.

Table 12. Relationship Between Respondents' Availment and Assessment of Importance of the Offices/Student Services and Programs under the Vice President for Student Affairs

Awareness of Offices/Student Services and Programs under VPSA	Importance of Offices/Student Services and Programs under Vice President for Student Affairs							
	Neither Important or Unimportant		Important		Very Important		Total	
	f	%	f	%	f	%	f	%
High			8	8.2	90	91.8	98	100.0
Average	2	1.4	13	9.1	128	89.5	143	100.0
Low	1	0.8	12	10.0	107	89.2	120	100.0
Total	3	0.8	33	9.1	325	90.0	361	100.0

Gamma = -0.092   p = 0.512   Not Significant

Respondents' Assessment and Importance of Student Services and Programs under the Office of the Vice President for Student Affairs

The relationship between the respondents' assessment of student services and programs under Office of the VPSA and the importance they had attached to these services and programs is found in Table 13. The data show that those respondents who are definitely satisfied of these student services and programs under the office of the VPSA

have attached great value or importance to these services and programs offered in the university. However, this truth is not supported by the Gamma test of association between these two variables which yielded the value of 0.209 with p value of 0.099 which is not significant. Hence, it could be said that regardless of the degree of satisfaction of the availed student services and programs under the office of the VPSA of the university by the respondents, they are more likely to attach great value or importance to the presence of such programs and services in the university.

Table 13. Respondents' Assessment and Importance of Student Services and Programs under the Office of the Vice President for Student Affairs

Assessment of Offices/Student Services and Programs under VPSA	Importance of Offices/Student Services and Programs under Vice President for Student Affairs							
	Neither Important or Unimportant		Important		Very Important		Total	
	f	%	f	%	f	%	f	%
Definitely Dissatisfied	1	2.3	4	9.3	38	88.4	43	100.0
Dissatisfied	2	1.8	13	11.8	95	86.4	110	100.0
Neither Satisfied or Dissatisfied			9	8.7	95	91.3	104	100.0
Satisfied			3	6.5	43	93.5	46	100.0
Definitely Satisfied			4	6.9	54	93.1	58	100.0
Total	**3**	**0.8**	**33**	**9.1**	**325**	**90.0**	**361**	**100.0**

Gamma = 0.209   p = 0.099   Not Significant

DISCUSSION

On the whole, this descriptive-relational study which made use of the one-shot survey design had determined the awareness, availment, assessment and importance of student services in the lives of students at Central Philippine University. The study found out that majority of the respondents are young, females, Roman Catholics, first and fourth year levels from the College of Business and Accountancy who graduated from public and private high schools located in the cities and towns and living with their parents while studying in the university; they are very much aware of the presence or existence of the twenty different student services and programs of the university during the two school years of the survey (2015 and 2018) and have attached a great value upon the presence or existence of these different student services and programs in the university; and majority of them are aware and had availed of the services and programs under the Vice President for Student Affairs, specially, Medical Clinic; Clinical Laboratory; and Guidance Services Center. Again, this result validates Bedia's (2012) statement that "*every service that the student services office provides must be visible and accessible to every individual student within the campus*".

The respondents' place of origin is significantly related to the importance they attach to student services and programs in general of the university. This means that students who came from barangays are more likely to attach more importance to these student services and programs compared to students who came from towns and cities. Also, their awareness of student services and programs under the Office of the Vice President for Student Affairs is significantly

related to their availment and assessment of these services and programs. Hence, it could be said that those who have high awareness of the presence of student services and programs under the Office of the Vice President for Student Affairs of the university are more likely to have high availment of such programs and services and are more likely to have very good assessment or are definitely satisfied of such programs and services. However, the respondents' availment of student services and programs under the Office of the Vice President for Student Affairs is not significantly related to the assessment and degree of importance they attach to these programs and services. Hence, it could be said that regardless of the degree of availment, be it high, average or low, of the respondents of these student services and programs under the Office of the VPSA of the university, they are more likely to attach high importance to the presence of such programs and services in the university.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the findings of the study, the following conclusions are drawn:

1. Majority of the respondents are young, females, Roman Catholics, first and fourth year levels from the College of Business and Accountancy who graduated from public and private high schools located in the cities and towns and living with their parents while studying in the university.

2. The respondents are very much aware of the presence or existence of the twenty different student services and

programs of the university during the two school years of the survey (2015 and 2018) and have attached a great value on the presence or existence of these different student services and programs in the university. Comparing the results, it could be seen that the lowest is Services for Student with Special Needs and Persons with Disabilities in 2015 and Chaplaincy Program in 2018 and the highest is Health Services in 2015 and Orientation Services in 2018. The top student services and programs that the respondents are aware of at present (2018) and in 2015 are: Orientation Services; Safety and Security Services and Admission Services. The services and programs which received the lowest percentages of awareness among the respondents in 2015, namely, Services for Students with Special Needs and Persons with Disabilities and International Student Services had increased a little in 2018. The top three student services and programs that the respondents have attached great value and importance are: Safety and Security Services, Health Services, and Orientation Services. Although they have also attached great value or importance to the presence of Placement Services (46.0%), International Student Services and Student Housing and Residential Services, the percentages of these are quite low compared to the value they had attached to the other services and programs.

3. Majority of the respondents are aware and had availed of the services and programs under the Vice President for Student Affairs. The top three services and programs under the VPSA that the students are aware of are: Medical Clinic; Clinical Laboratory; and Guidance Services Center. This result is understandable because majority of the respondents are freshmen and their present

experience is with these services when they underwent physical examination and with their SEAL (Self Enhancement Activities for Life) classes with the Guidance Services Center. Moreover, low percentage of awareness of the Career Placement Office is due to the fact that these students had not availed yet of the services of the said office. The student services and programs which are meant for all students were availed by the majority of students, namely: Guidance Services Center; Medical Clinic; Clinical Laboratory; and Swimming Pool. However, the Dental Clinic which is meant for all students were availed by a little less than two-fifths of the studentry only. Moreover, the other services and programs were availed by more or less one-fourth to around three fifths of the students because of the nature of their service or program which is not meant for all students like the Dormitories; the Sports and Athletics also caters only to the athletes of the university; the Career and Placement Office which is meant to help the graduating students or graduates of the of the university; Student Discipline which caters to those students who have done mistakes and meant for the security of the students; and, Student Development and Programs which caters most likely to scholars and student-leaders. These results show that there is a need to increase students' awareness of these services and programs so that they can avail of them or tell other students about the existence of these services and programs so that if they need them they can avail of them. Again, this result validates Bedia's (2012) statement that "*every service that the student services office provides must be visible and accessible to every individual student within the campus".* This also conforms to Bedia's findings (2012) wherein there is also low extent of utilization or

availment of guidance services of STI among his respondents.

4. The respondents' characteristics such as age, sex, college, religion, type of high school graduated from, place of high school graduated from, place of origin, and living arrangement while in school are not significantly related to their awareness of the student services and programs in general of the university. This means that regardless of their characteristics, they are much aware of the student services and programs in general of the university. These results is the same with the results of the survey conducted in 2015.

5. The respondents' place of origin is significantly related to the importance they attach to student services and programs in general of the university. This means that students who came from barangays are more likely to attach more importance to these student services and programs compared to students who came from towns and cities. On the other hand, the respondents' characteristics such as age, sex, college, religion, type of high school graduated from, place of high school graduated from, and living arrangement while in school are not significantly related to the importance they attach to these student services and programs.

6. The respondents' awareness of student services and programs under the Office of the Vice President for Student Affairs is significantly related to their availment and assessment of these services and programs. Hence, it could be said that those who have high awareness of the presence of student services and programs under the office of the Vice President for Student Affairs of the

university are more likely to have high availment of such programs and services and are more likely to have very good assessment or are definitely satisfied of such programs and services.

7. The respondents' availment of student services and programs under the Office of the Vice President for Student Affairs is not significantly related to the assessment and degree of importance they attach to these programs and services. Hence, it could be said that regardless of the degree of availment, be it high, average or low, of the respondents of these student services and programs under the office of the VPSA of the university, they are more likely to attach high importance to the presence of such programs and services in the university.

 Recommendations

        Based on the findings and conclusions of the study, the following are hereby recommended:
1. Since the students had expressed their need by attaching great importance to these institutional services, it is hereby recommended that the university should maintain the quality services that it offers to students. This is true for the general student services and programs as well as the student services and programs offered under the office of the Vice President for Student Affairs.

2. Moreover, since students come and go, there is a need to conduct this study preferably every two years to know the sentiment of the present students so as their needs could be catered to.

3. Specific comments and suggestions given by the respondents for each office/student services and programs under the VPSA should be looked into by the concerned unit for further improvement of the delivery of services to the students.

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