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CONTENTS

LOVE THY NEIGHBOUR: EXPLORING THE EXPERIENCE OF INDIVIDUALS IN POLYAMOROUS RELATIONSHIP

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ABSTRACT

With the continuous expansion of the internet, people are seeking for different kinds of intimate relationships This includes the relationship form called polyamory, a relationship structure that allows the people involved to have multiple partners, consensual and honest relationship. It is distinguished from other forms of non-monogamous relationships (i.e. cheating or infidelity, swinging, and polygamy). Thus, leading the researchers to provide a study regarding its existence despite conducting it in a highly monogamous culture particularly in the Philippines and combined with the scarcity of local literature. The researchers sought to provide a definition of polyamory in the Philippines through the lived experience of the participants in the study. The researchers have interviewed 5 individuals who are currently engaged in a polyamorous set-up. The analysis resulted to 2 themes relating to how their lived experience can typify polyamory in the Philippines. The participants describe it as being in a relationship formed with consent, honesty, and commitment that could vary in the set-up of the people involved in it. These variations could include having partners who are romantic, sexual, and platonic, polyamorous, monogamous etc.

Keywords: polyamory, multiple relationships, consent, honesty

INTRODUCTION

As different types of intimate relationship emerge in the twenty-first century, multiple-partner relationships remain to be under studied, especially in the local setting. Amato and James (2010), have presented a data that predicted 43 % to 68% of marriage would end because of divorce in the 20th century and is seen as a result of high rates of infidelity. With these problems becoming apparent and due to the use of Internet all round the world, the openness and emerging of a sex positive culture resulted to people claiming to be unsatisfied with the combined limitation of serial monogamy and the rising percentage of divorce rate and infidelity rates, especially in the United States (Johnson, Giuliano, Herselman, & Hutzler, 2015). Some individuals are seeking for some openness and honesty in a relationship that is common in polyamorous relationships (Johnson, 2013).

Different factors such as high divorce and infidelity rates in monogamous couples (Weitzman, Davidson, Phillips, 2012); The growth of the economy and issues such as the social equality of women, resulted to having varied options on how they can arrange their intimate relationships (Sheff, 2005) this resulted to a growing number of individuals seeking different alternatives to the traditional relationship form (heterosexual monogamous relationship).

Meanwhile, in the Philippines, people are conservative and sensitive about different topics such as clothing, language, gender, relationships and sex. In International Social Survey Programme (ISSP) which was conducted in 1991 (Mangahas, Mahar, & Guerrero, 1992), it shows that a lot of Filipino citizen has a more conservative attitude towards sensitive topics such as sexual relations. Based on the survey, one could conclude that this is brought upon by the effect of religious beliefs of Filipino, where it is stated that extramarital relations is forbidden.

Filipinos tend to assume that all relationships should be monogamous. People should have or had a romantic relationship with only one person, and those people who have been involved with more than one person are considered to be cheating. Polyamory is a consensual non-monogamous relationship set-up. This kind of set-up allows multiple partners at the same time (Johnson, 2013).

In this kind of relationship, having multiple partners does not mean that the polyamorist is just looking for other sex partners. Rather, this kind of relationship set-up is an engagement to multiple honest, equal, nurturing, affectionate, and non-exclusive relationships (Klesse, 2014) which includes people with different gender, sexual orientations and sexual identities (Aviram & Leachman, 2014).

Polyamory originates from the combined Greek and Latin root word that roughly translates to "many" and "love" (Boyd, 2017), it is the situation wherein a person may prefer to be involved in an intimate or sexual relationship with other people than his/her partner at the same time. The variations for the term polyamory appeared on 1950s and the definition solidified in the succeeding decades (Alan, 2010). The older generation of polyamorist in the USA, especially in the San Francisco have emerged in the 1960s - 1980s (Mint, 2009; Klesse, 2011) and it is gaining popularity over the last decade (Ritchie and Barker, 2007).

Moreover, this kind of relationship rejects the norm that a single person can satisfy all the needs of his or her partner in a relationship such as their needs for emotional, social, sexual, economic and intellectual aspects.

According to Johnson (2013), both personal and interpersonal growth has been seen to enhanced in a polyamorous set-up, this is due to the fact that there is a closer association formed with people with various personality traits and personal strengths. In addition to this it is also different from other forms of non-monogamous relationships which includes swinging, infidelity, and polygamy.

In order to differentiate polyamory to other forms of non-monogamous relationship, which includes relationships such as swinging, infidelity, and polygamy the researchers discussed it further.

Swinging

Polyamory differs from other kinds of non-monogamous relationships, such as swinging, polygamy and to the concept of infidelity. In swinging, it involves sexual encounters with other couples without emotional involvement. This type of relationship places a higher emphasis on recreational sex (Jiang, 2017). In the study of Rubin (2001), Swinging has been defined as a consent for married couple to exchange sexual partners. It primarily involves sexual encounters with other couples without emotional involvement. In this type of relationship married couples place a higher emphasis on recreational sex (Jiang, 2017) while polyamory on the other hand is primarily a relationship-oriented with an emphasis on emotional intimacy and long-term commitments to non-monogamous set-up rather than a set-up that focuses on recreational sex with other married couples (Deri, 2012; Weitzman, Davidson & Phillips, 2012).

The concept of love must always be present in all the partners involved in polyamory. Polyamory literally means "loving more than one". The kind of love in polyamory can be varied as emotional, spiritual, sexual or even a combination of all three. It will be formed according to what are the agreements and desires of all the parties involved (Klesse, 2011). There has been a little overlap in swinging and polyamory but there is a significant difference between the two types of consensual non-monogamy.

Infidelity

Infidelity or cheating on the other hand is considered as a sexual relationship with people outside the monogamous set-up. It can be distinguished from polyamory due to the presence of an open and honest communication with all of the partners involved (Hymer & Rubin, 1982; Brandon, 2016). Additionally, it can be also defined as the sexual or emotional engagement of a person within a monogamous relationship other than his or her partner which resulted to a violation of the agreed set-up of the relationship. (Blow and Hartnett, 2005).

Infidelity is committed when a person engaged in a relationship (usually sexual) with another individual other than his or her spouse, without their partner's knowledge and consent, thus violating the characteristics of marriage (shared intimacy and trust bounded by religion/law) (Swenson, 2003). Polyamory can be differentiated from infidelity through the presence of honest communications, knowledge, and consent in all the parties involved about the existence of all the other relationships (Johnson, 2013).

Polygamy

Polygamy is a cultural or religious practice that allows a person to be married with more than one partner. It can be further broken down into three main types: polygyny, polyandry, and group marriage. The practice in which a man being married to multiple women is called Polygyny; when a woman can be married to multiple men, it is called Polyandry while the practice of multiple men getting married to multiple women is called group marriage (Walston, 2001; Mulder, 2009).

Polygamy is a practice that is associated to cultural imperative as opposed to it being a consensual choice among individuals (Johnson, 2013; Al-krenawi & Graham, 2006). More than 850 societies in the world practiced polygamy, this includes Africa, Middle East, North america, Oceania and Asia (Al-krenawi & Graham, 2006).

Polygamous relationships are often considered to have patriarchal characteristics. Due to this characteristic there is a high potential for unequal and discriminative treatment of wives by their husbands (Thobejane & Flora, 2014) which may include the following: unfair treatment, commodification, separation from society; and favoritism among the wives and disapproval or neglecting of other wives within their households

In comparison to polyamorous relationship which promotes honesty, integrity, and respect. Polyamorous relationships primarily focuses on building a long-term relationship with all of the individuals included in the relationship set-up, which has their own agreements and set of rules (may be romantic only, sexual only or combination of the two) and that sex is only an aspect of the relationship (Boyd, 2017).

Challenges of polyamorous individuals

Furthermore, polyamorous individuals may also experience discrimination from the mainstream society. For they may be labelled as deviants and they may feel that they need to persuade other people that their chosen lifestyle is possible and effective (Falco, 1995).

Additionally, they may experience social disapproval and legal discrimination similar to the experience of those who are in the LGBT community (Peabody, 1982). Polyamorous individuals may often feel stress and fear of rejection by others. They may feel that their own family members will disapprove their lifestyle. They may fear what would their environment's reaction would be, the reaction of the people they see on a daily basis such as their co-workers or supervisors and the negative effect of it to their careers (Weitzman, Davidson, & Phillips, 2012) since marriage of polyamorous individuals are not recognized by the church and the state (Browning, Reynolds, & Dworkin, 1991). Moreover, polyamorous couples may experience relationship concerns. Like time and resources, to whom they should spend their time with? Additionally, they may also experience concerns with disclosure. How much sexual or emotional disclosure is enough (Weitzman et al., 2012)

The significance of the current study is it can add a new information in the body of knowledge of polyamorous relationship. By exploring polyamory in the Philippines, the researchers aimed to explain the formation, struggles and their solutions, and lived experiences of polyamorous individuals in the Philippines. This study offers an understanding of polyamory through providing a literature from an unbiased academic standpoint that determines the nature and concept of the lived experiences of polyamorous individuals. Furthermore, the research could be a starting point in creating and developing a more powerful tool that could encapsulate the experience of polyamorous individuals that can be used in the clinical, educational, and industrial setting. With such tool other researchers could develop the methods on how to address the challenges these individuals encounter in their daily lives.

Researchers have chosen the topic on polyamory because it is an interesting topic since the phenomenon contradicts the cultural and religious practices in the Philippines. The researchers neither advocate that the practice is a response to other form of relationship styles, nor criticizes polyamorous individuals for their choices. Additionally, the background of the researchers is that they are both heterosexual males, aged 20 and 21 years old, both are undergraduate researchers studying Bachelor of Science in Psychology in the Colegio of San Juan de Letran - Manila. Both of the researchers does not have any experience in polyamorous relationships and that they have only experienced monogamous relationships.

The study is created as a means of understanding the phenomenon through the use of an academic research conducted in the Philippine context. Since the articles gathered indicates that the phenomenon exist in the foreign context. Unfortunately, upon searching the researchers only found a single article that tackles the nature and concept of polyamory in the Philippines (Balisado & Barcelon, 2008). Thus, the researchers would like to provide an additional information on polyamory since there is a scarcity on local literature. Furthermore, researchers from the western countries, pay little attention to the concept of polyamory (Barker & Langdridge, 2010) and only a small amount of study focused on the development of polyamorous relationships. The researchers only determined the nature and concept of polyamory among Filipinos engaged in it and their lived experience and struggles in the Philippines.

Some of the challenges that polyamorous individuals face are that their relationship was considered as deviance (Weitzman., et al, 2012) and when their relationship is not being kept a secret, polyamorous individuals may feel that they need to persuade other people that their chosen lifestyle is effective. There are also a misunderstanding that polyamorous individuals are being perceived as emotionally disordered (Brandon, 2016) because they are becoming emotionally and sexually involved in an intimate relationship with other people outside their primary partner.

Several studies from the literature have gathered the demographics of polyamorous individuals (age, sex, gender orientation, socio-economic status, and etc). High divorce rate and infidelity rates is a huge factor for the tendency of an individual to enter into a polyamorous relationship (Johnson, Giuliano, Herselman, & Hutzler, 2015). As separation and infidelity is becoming more apparent, an individual may seek new and different alternatives to the traditional relationship form. Sheff (2005) have also linked the expansion of the internet that gives visibility and accessibility to information and people with sex-positive culture. Middle class individuals and above with higher degree have the resources and capability to access information to sex-positive culture and therefore, can explore different intimate relationship.

Theoretical Framework

Conley, Matsick, Moors, & Ziegler (2017) have examined two theories of interpersonal relationship and one social cognitive theory that could investigate the dynamics of different consensual non-monogamous relationship. One of which is Kelley & Thibaut's Interdependence theory (1978). Interdependence theory suggest that connection between people in a relationship has its own cost and benefits gained from the other people involved in the relationship. In the article of Balzarini, Campbell, Kohut, Holmes, Lehmiller, Harman, and Atkins (2017) surmised that entering and staying into a polyamorous relationship can be explained through the difference in the ratio of cost and benefits in the relationship, and to the involvement of one person to each of his or her partner's lives. Interdependence theory could also explain the reasons of polyamorous individuals on why they would have invest less time in each partner, since the division of such cost (i.e. time) could gain more benefits from different partners (Rusbult & Buunk, 1993). Polyamorous individuals can share more of their "love" to all of the partners involved in the relationship set-up while not necessarily falling out of love and neglecting their other partners.

In interdependence theory, there are concepts known as Comparison level (CL) and Comparison level of alternatives (CLalt). Comparison level involves the expectation of a partner (Thibaut & Kelley, 1959). It involves what they are expecting to receive in a particular relationship and such expectations are being compared to the person's view of how a relationship would be or by the expectations of the society regarding a relationship. Whereas, comparison level of alternatives tackled the connection between the "give and take" in the relationship to determine one's satisfaction and commitment to their partners.

A person can have a committed relationship but not fully satisfied and a person can also be satisfied in a relationship but cannot fully commit to it. This is where the alternative of the relationship could take place. If CLat would be present in a monogamous relationship, it would mean that the relationship could be terminated because it is not acceptable to be satisfied by other person outside the relationship, it would be forbidden to go on dates with different persons other than their own partner. While in a polyamorous relationship, having a new partner would not automatically mean that the current relationship would be terminated because it is acceptable for a person to go on dates while maintaining their relationship. This kind of consent among the partners in the relationship would mean that polyamorous individuals would be allow them to seek for other partners or go on dates with new people and explore different alternative set-up in their existing relationship.

METHODS

This study made use of the qualitative phenomenological design, drawing on the comprehensive picture of the phenomenon being studied.

Participants in the study

Two methods are used to recruit the participants of the study. First, the researchers attempted to recruit participants by posting on social media, including groups on Facebook such as Polyamory Philippines, HAPI – Humanist Alliance Philippines, International, HAPI – Lgbt+Straight Alliance, International Humanist and Ethical Youth Organisation, and other LGBT groups because most of the people engaging polyamorous relationship belong to the LGBT community (Klesse, 2014) and on Twitter such as Now Open PH and Ψ Researcher's guide. Unfortunately groups and page we have contacted has polyamorous individuals but none of the members are interested in participating in the study. Second, the researchers asked other researchers to refer anyone in the study if they know individuals engaging in polyamorous relationship.

The researchers' have tested the interview protocols, the unstructured interviewing techniques and open-ended questions by conducting a pilot interview regarding the experience of individuals engaging in polyamorous relationship**.** The participant recruited in the pilot interview was an acquaintance by one of the researcher and the first participant was referred by another researcher outside the study. The participants then referred other willing individuals to participate in the study. The researchers recruited the participants who were in a polyamorous relationship.

Sheff and Hammers (2011) have identified that those who enter polyamorous relationships, are usually well-educated, middle-class, white (89%) individuals. Their (Sheff & Hammers 2011) participants in this study are composed of individuals which 74 percent have professional jobs, 88 percent are in college education and 67 percent have acquired a bachelor's degree and 21 percent have completed graduate schools. Additionally, the participants consists of 28 percent of straight men and 25 percent of straight women. Haupert, Gesselman, Moors, Fisher, & Garcia (2017), have participants consisted of 73 percent of gay men and 37 percent of lesbian women. Additionally, other articles on polyamory have also included a wide range of participants. Ranging from people that are heterosexual, homosexual, bisexual, and others who also belong to the LGBT community. For instance, in the study conducted by Barker (2005), most of the participants have relationships with both men and women and only two participants have identified to be straight men and two identified as lesbian women, about half of the researcher's participants consists of men identified as gays and the other half consists of individuals identified themselves as bisexuals, two trans men and one heterosexual man (Klesse, 2006), and Mitchell, Cobb and Bartholomew (2014) have made a gender breakdown of their sample. 623 of the participants have identified themselves as females, 412 have identified themselves as males, 32 have identified themselves as genderqueers, there are 6 of the participants who identified themselves as transgenders and the remaining 9 of the participants have identified themselves as "other".

Individuals who have identified themselves as "polyamorous" have been in age starting from adulthood. In one study by Barker (2005) where he explored the conclusion of people in polyamory of their own sense of self, their age of the participants ranged from 20 - 60, with an average age of 33 years old.

In addition to this, another study by Barker and Ritchie (2007) which aimed to explore issues around gender in non-monogamous relationships have participants in focus groups comprised of eight women, ranging from early twenties to mid-forties. Participants' age range from other studies have also been in early twenties to late 50s and 60s (Sheff, 2005; Mitchell, Bartholomew, & Cobb, 2014; Mogilski, Memering, Welling, & Shackerlford, 2017). This is due to the reason that people entering adulthood are undergoing reorganizations of the neural circuitry of prefrontal cortex which is involved in higher level of cognitive activities resulting to having a better grasp of reasoning (Shaffer & Kipp, 2010) . This allows people at this age to analyze their thoughts more efficiently.

Behavioural indicators of people engaging in different kinds of non-monogamous relationship have been explored when Knapp (1976) administered a set of standardized psychological test to a sample of individuals engaging in polyamory. Consistent from the previous literature (Knapp,1976), the behavioral indicators of polyamorous individuals states that they tend to be independent, are ambitious in terms of academic performance, producing outputs that are artistic in their own way or different from the norm or originally, relatively uninterested to what the other people would say, they are more concerned in their own subjective values and are willing to gamble differents ways to explore such possibilities. One of the most intriguing subjects in the dynamics of polyamorous relationship is how does polyamorous individuals handle jealousy provoking situations. These situations include being the witness or having the thought that whenever they leave their home their partners having sexual intercourse with other people.

Deri (2012) have studied the methods and reasons of why women practice polyamory and how is jealousy confronted, showed, and re-imagined in their relationships. Across time, the philosophy in polyamory has developed. Polyamorous individuals have come up with rules on love, the structure of their relationship, and the how to handle their own feelings of jealousy. As a response to it, such feelings has been transformed to attain compersion. According to Wolfe (2003), compersion is described as an emotional experience of pleasure that is felt when their partner/s experience sexual and or emotional connection with other people.

Many studies have provided explanation for the emergence of such relationship. In the study of Jackson & Scott, (2004) they argued that feminist views non-monogamous relationship such as polyamorous relationship as a response to the patriarchal undertones of a monogamous relationship wherein it acts as an ideology for women's "sexual liberation" and allows them to respond to the changing social trends (Robinsons, 1997; Haritaworn, Lin, & Klesse, 2006). In the 1990s, Wilkins (2004) found that feminist continued to challenge the dominant constructs of gender and sexuality by taking a pro-sex stance. Here, they resurrected the connection between women's liberation and their sexual agency, calling it a new model of female sexual subjectivity that redefines the markers of "girly-ness" and a mass re-appropriation of historically woman-negative words (Attwood, 2007)

Additionally, Barker and Richie's (2007) study on polyamorous women, their participants identified themselves as feminist and thus may linked it explicitly to their polyamorous relationship. It is recognized as "women-centered" because it values the feminine application of organization skills and communication. Moreover, Barker and Ritchie concluded that females engaging in polyamorous relationship are less dependent on their male partners, in contrast to heterosexually monogamous females. They are also more free to establish equal value on their friendships and sexual relationships. Furthermore, in the study of Robinson (1997) also indicated that polyamorous relationship adheres to the concepts of feminism since it challenges the concepts of exclusivity, possessiveness, and jealousy.

Polyamorous people reap a lot of benefits from their lifestyle. According to Weitzman and his colleague (2012), many polyamorous individual discover happiness in having close relationship with either or both sexual and emotional relationship with multiple partners.

In addition, there were no significant difference found between polyamorist in the sample and populations norm (monogamous couple) and quoted "Neither group was particularly neurotic, immature, promiscuous, maladjusted, pathological, or sexually inadequate" (Knapp, 1976). However, most of the people expects to have sexual exclusivity in a relationship and convinced that extramarital sex is wrong despite the research findings that there is no significant difference in couples engaged. Moreover, there are rules which are against consensual non-monogamy (Mitchell et al, 2014) and strong resistance to marriage of multiple partners.

Polyamorous relationship often faces issues towards their chosen relationship style. This may include the perception of other people towards their relationship and often refers to it as infidelity, but these two constructs are not the same. In polyamory, the parties involved construct their own rules and boundaries that can be modified over time and if such rules (agreed upon rules by all parties) are broken it can be considered as infidelity (Williams & Prior, 2015).

Screening process

The researchers have contacted 9 prospective participants and 4 of the prospective participants have not been included to the study after not responding to the researchers inquiries. Two prospective participants did not respond to our message via Twitter and email, and two prospective participants' responds at first but stopped responding to our messages eventually. The researchers have contacted 4 of the participants through their Twitter account and 1 referred participant was contacted through their email. To make certain that the participants were in a polyamorous relationship, the researchers asked the participants if they are currently involved in a multiple relationships and then asked if the parties involved have knowledge and consent about the set-up. All of the participants responded affirmatively to this question.

This study involved 5 individuals engaged in polyamorous relationship. The researchers used purposive sampling technique to screen the prospective participants. The following selection criteria were followed: individual believe that they are either polyamorous person in a polyamorous relationship; in a polyamorous-monogamous relationship (the participant has one monogamous partner) (Walston, 2001), individuals ages 18 years old and above, have at least two partners (Weitzman, et al., 2012), where parties involved may had at least a verbal agreement regarding their relationship (Zhu, 2018), but excluding those who are married and engaged in other forms of consensual non-monogamous relationship such as swinging, infidelity and polygamy and involved in this relationship set-up for at least a year (Kessler, 2015), this kind of love in polyamory could vary from being emotional, spiritual, sexual or even a combination of all three. It is formed according to what are the agreements and desires of all the parties involved (Klesse, 2011), participant is committed to any type of sexual orientation relationship Lesbian, Gay, Bisexual and Transgender (LGBT) (Klesse, 2006), at least have a college degree or higher educational status (Sheff, 2005) and belongs to the middle-class or upper-class socio-economic status (Sheff & Hammers, 2011).

The researchers selected individuals age 18 and older because it is the legal age of consent in the Philippines and the researchers adapted the demographics of the participants involved in other research (Jiang, 2017; Mitchell, Bartholomew, & Cobb, 2014; Ritchie & Barker, 2007; Barker, 2005).

After setting the interview schedule, the researchers opted to let the participants chose the location that is more convenient for them to conduct the interview. Upon meeting the participants, the researchers confirmed the identity of the participants and proceeded to discuss the background of the study. The researchers proceed to discuss the informed consent, approximate duration of the interview, confidentiality such as the storage of the information gathered and the purpose of the study. The interview process lasts on an average of 52.6 minutes (ranges 35-82 minutes), and after the interview, the participants were debriefed. The researchers asked the participants for a feedback regarding the whole interview process. Lastly, a token of appreciation have been given to the participants of the study to show gratitude and consistently inform them regarding the updates of the study and provide the final results. This have benefited the individual to better understand his prior behaviour regarding the engagement to polyamory

Final sample

The first participant, W is a 22-year-old undergraduate student whose gender identity is lesbian and has 1 romantic partner and 2 platonic partner. W is in her last year in college where she is taking an arts related course. The second participant, D is a 28-year old college student whose gender identity is male and has 3 romantic partner and 3 platonic partner. D is taking a course related to communications. The third participant, K is a 23-year-old student working as a graphic designer whose gender identity is female and has 3 romantic partners. The fourth participant, E is a 22-year-old undergraduate student whose gender identity is female and has 2 romantic partner. E is taking a course relating to science. The fifth participant, H is a 23-year-old graduate student whose gender identity is female and has 2 romantic partner. H is planning to take a masteral degree in Japan this year.

Five individuals have been included in the final sample involved in polyamorous relationship. Based on the participants data, their average age was 23.6 (range 22-28), the average length of the polyamorous set-up was 3.2 years (range 1-7 years), the average partner count of the participant is 3.6 (range 2-6 partners), the socio-economic status of the participants ranges from middle to upper class, the educational background of the participants ranges from college undergraduate to college graduate in the field of liberal arts and sciences, and the gender of the participants consists of 1 male and 4 female which 1 of the female participants identify herself as a lesbian.

Instruments

The participants of the study filled a basic demographic profile. For the purpose of having an in-depth collection of data from the participants, the acquisition of data through the use of an in-depth interview have been used to gather the experience of polyamorous individuals. The interview have lasted approximately 45 minutes to 1 hour.

Participant's robotfoto

The participants of the study have filled a basic demographic profile which consists of their preferred alias gender orientation, socioeconomic status, educational attainment, civil status, and ask the subject if they are comfortable in sharing the information about their previous or current polyamorous experience.

Semi-structured interview

The researchers have created a questionnaire that includes the questions that explored the experience of polyamorous individuals and the time period when the subject is involved in a polyamorous relationship, the duration before the gained knowledge and consent about the other partners, and who were the one who initiated the polyamorous set-up, and the duration of their current or past polyamorous experience.

Mode of Analysis

The qualitative data was analysed through the use of an inductive thematic analysis. Inductive thematic analysis is a form of thematic analysis that is data-driven and it is a process of coding the data without attempting to insert it into a pre-existing coding frame or the analytic preconceptions. The researchers have read and re-read the fragments and codes for all of the themes related to identify the characteristics of the participants' relationship without paying attention to the themes that the previous literature of the topic have identified. It is a flexible method that can used gather, examine, and report the recurring themes within the data and it allows the researchers to create codes without the use of pre-existing codes. It is method that can be used to answer a wide range of question about the participants' experience to represent a construction of the phenomenon. (Braun & Clarke, 2006, 2013).It allows the researchers to to identify the themes through studying the recorded interviews of the participants. After the transcribing the gathered data, the researchers encoded it through the use of a software called Qualyzer. The software was used to review and find similarities to come up with codes based from the fragments or statements of the participants that could lead the researchers to answer the research questions.

The initial coding was done through the use of open coding and line-by-line coding, wherein the researchers analysed every statement of the participants to generate the initial set of codes. After compiling and examining the codes the researchers found the initial themes in the statements. The themes are the patterns in the statements of the participants that captures something that is significant about the data that could answer the research questions of the current study (Braun & Clarke, 2006). After that the themes were reviewed and modified, a report that has been produced and validated by other gender-related studies researchers and the participants of the study.

Table. 1 The coding process of the researchers.

Open code	Axial code	Selective code
Feelings on the start of the relationship Love Description of the relationship Time for self Coping strategies Commitment Exploring the idea of the relationship Mate selection Polyamory defined Start of the romantic relationship Relationship with second partner Communication Duration Couple activities	Couples activities Lived experience Past experience in monogamous relationship Duration of the polyamorous relationship Searching for other polyamorous individuals Open relationship Definition of paramour and metamour Queer platonic definition Inclination to polyamory New relationship energy Development of the relationship Factors to engage in polyamorous relationship	Definition of polyamory Compersion Polyamorous agreement
Openness Reaction of the environment Reaction to the reaction of the environment Platonic relationships Possible challenges Compersion Consent Existence of other relationships Personal freedom Stigma Queer platonic Compromise	Emotional issues Communication problems Reaction of the environment Relational concerns Stigma Scheduling concerns Time for self Openness Consent Time for self	Contemplating on the kind of relationship Challenges in the relationship Coping strategies Plans for the future
Plans for the future	Possible events in the future	

Based from these figures, the codes found by the researchers from the statements of the participants were revised and checked properly in order to capture the themes properly. Since most of the first few versions of the codes overlaps with each other.

Ethical Considerations

The research abide to the ethical research codes from the Psychological Association of the Philippines and the American Psychological Association. The researchers have taken the following considerations in keep all information of the participant confidential and protecting it from unauthorized disclosure, tampering, or damage. In order to maintain the anonymity of the participants', they are placed under a pseudonym. The information gathered from the participants have only been used in this study and no one outside the research study can have access of the information they have given. The participants were reminded that if the questions are too intrusive they have the choice to not provide answers to it. Furthermore, all the audio or video recordings gathered through interview, will be kept by the researcher and will be deleted after the completion of the study. This would mean that all the procedures from the beginning of the research have been a responsibly obedient to the research ethics. The security of the participants have been ensured through the anonymity of the data and the accessibility is limited to the researchers alone. The researchers provided consent forms which contains all disclosure regarding the research and strictly complied the to the confidentiality of the data with respect to the privacy of the participants.

RESULTS

The goal of the study was to provide a literature that captures the characteristics of their relationship set-up through the experiences gathered from polyamorous individuals in the Philippines. The responses of the participants have enlightened the researchers and provided an in-depth personal perspective for this phenomenological study. The participants gathered in the study has exhibited the importance of openness and communication in their polyamorous relationship, especially in giving consent, expressing problems and resolving problems in their relationships.

5 verbatim transcripts were analysed by the researchers to come up with 2 emerged categorical themes. These 1st theme (structure) contains three sub-themes (definition of polyamory and polyamorous agreement) and the 2nd theme (phases of the polyamorous relationship) contains four sub-themes (Contemplating of the kind of relationship, challenges in the relationship, coping strategies, and plans for their future) to describe specifically the conceptualizations.

Theme 1: The structure

In this study, the structure refers to the experience of polyamorous individuals in their relationship whereas they discussed the nature and shape of each polyamorous relationship. The structure covers the flexibility and openness of each relationship based on the agreed upon rules in the relationship. Based from the statement of the participants, polyamory refers to creating multiple commitment and loving relationships, founded on honesty and open communication that allows each parties involved the opportunity to learn and grow during the course of their relationship.

The structure covers the needs and wants of the parties involved in a polyamorous relationship. As stated by the participants of the study, the structure is not only limited to being romantic and sexual thus suggesting the existence of different forms of polyamorous set-ups. These aspects has been discussed thoroughly by all the parties and are continually changing as the relationship progressed and matured. The structure of the polyamorous relationship was coded according to definition, compersion, and paramours and metamours.

"The thing about polyamory is it's not the same for everyone talaga, for every setup, it's not the same. There are different roles for couples, I've heard of polyamorous setup wherein walang sabihan… "Don't tell me about what's happening outside this relationship [and] I won't tell you." There are [also] poly fidelity setups wherein there they do not date outside their [set-up]" (D, 28 M)

Sub-theme 1: Definition of polyamory

In this study, *polyamory* refers to the lived experience of Filipino engaging and creating multiple commitment and loving relationships (E, 22 F). This definition has been based on the descriptions of the participants that are engaged in polyamorous relationship. They describe that polyamorous relationship is almost the same with the monogamous relationship that requires work, honesty and openness.

"Polyamory is creating multiple commitment and loving relationships, founded on honesty and open communication. As for the relationships in polyamory, they're basically just like anyone else's relationships, they require work, they require time. Sometimes your partner gives you a headache. It's just like any normal relationship. Like there's fidelity, there's honesty. (E, 22 F)

Most of the participant agreed that polyamory means having multiple relationship founded on love and commitment, and having multiple relationships does not mean that the participants' aim is to just find potential sexual partners and to "sleep around." Each relationship in the polyamorous set-up are founded on love, honesty, commitment and respect. This supports the claim of Johnson (2013) where he stated that polyamory is a consensual non-monogamous relationship set-up. It is a set-up that allows having multiple partners at the same time.

In this kind of relationship, having multiple partners does not mean that these individuals are just looking for other sexual partners. Rather, this kind of relationship set-up is an engagement to multiple honest, equal, nurturing, affectionate, and non-exclusive relationships (Klesse, 2014) that includes people with different gender, sexual orientations and sexual identities (Aviram & Leachman, 2014).

Sub-theme 2: Polyamorous agreement

Polyamorous agreement refers to the agreement established by all the parties involved in a particular polyamorous relationship. Based on the lived experience of the participants in the study, every polyamorous relationship have different agreements within their relationship. This is based on what they are comfortable and fulfills what they need and wants in a relationship.

"The thing about polyamory is it's not the same for everyone talaga, for every setup, it's not the same. There are different roles for couples, I've heard of polyamorous setup wherein walang sabihan… "Don't tell me about what's happening outside this relationship [and] I won't tell you." There are [also] poly fidelity setups wherein there they do not date outside their [set-up]" (D, 28 M)

Another emotion that is practiced in polyamory is compersion. *Compersion* refers to the happiness experienced by the participants when their partner is being happy because of other person. The compersion is said to be an emotion practiced by polyamorous individuals where they find happiness in their partner's happiness. Polyamorous relationship is distinguished from other relationship structure due to the existence of the feeling called "compersion". In the literature, compersion is described as the feelings of pleasure that is felt whenever their lover or paramour experience sexual and or emotional connection with other people (Wolfe, 2003). Further elaborated by the participants by stating that:

"I see your partner's happy and you feel happy for your partner. So it's finding happiness in your partners' happiness. And it's such a big deal, when it comes to polyamory." (E, 22 F)

Compersive individuals felt contented and happy, when their paramour would enjoy their personal time without trying to possess or control any of them. Individuals in a polyamorous relationship wants to be transparent about their desires towards themselves and their partner.

Practicing compersion has been hard for the participants' of the study and other polyamorous people. Being that the "open couple" is the foundation of some polyamorous relationship, also everyone respects the hierarchy (if there is one) rather than equal love for all partners (Wolfe, 2003)

"We're very supportive of each other and were like what we call "dedicated secondaries" wherein were not looking for more with each other. We're perfectly happy where we are and where we are is both beneficial to each other in that sense or enriching in each other's life as is but I do see her as a person I can be around for indefinitely life." (D, 28 M)

The participants defined compersion as being "happy" that their partner's are happy. Even if the happiness is not brought by themselves. This happiness by their partners may be brought by interaction with their peers and partners (metamour). There has been a little difference with the definition stated by Wolfe (2003) that it is the emotional experience of pleasure that is felt when their lover or paramour experience sexual and or emotional connection with other people whereas the participants specifically stated that compersion is simply feeling happy in their partner's happiness.

With regards to the partnerships involved in a polyamorous relationship, the participants lived experience have described the parties involved in the relationship as paramour and metamour. The *paramour and metamour* has been referred as the partner's involved in a polyamorous relationship. To be more specific, the participants lived experience have describe paramour as all of the partner of a polyamorous person and a metamour is the partner of your partner.

As shown in the figure below, groups (A, B and C) are used to describe the parties involved in a polyamorous relationship.

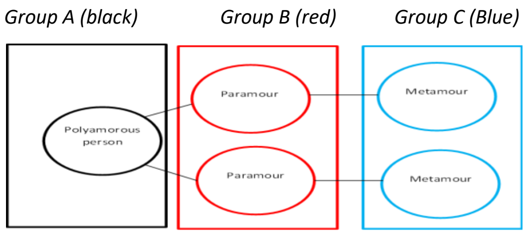

Figure 1. Illustration of the paramours and met amours

The in figure 2, the group A would refer to a polyamorous person engaging in a polyamorous relationship which has 2 partners (Group B) also known as the paramour and the Group C would refer to the metamour or the partner's partner of the polyamorous person.

Based on the lived experience of the participants, they have defined metamour as the partners of their partners. In the literature, Ritchie and Barker (2006) define the term paramour as the unmarried partner of a married polyamorous person and a metamour is a non-romantic bond between person x and z, who are both romantic partners of person y (Iwanowska, 2018). Simply put, metamour is what a polyamorous person call their partner's partner.

"In a nutshell, paramour are how you address your partners (primary)... Metamours is your partner's partner, so those are "S" partners of five or six of them. (E, 22 F)

The participants would describe metamour as their partner's partner. This differs from the statement of Ritchie and Barker (2006) that paramour is the term used for a polyamorous individuals unmarried partner. Although the use of term seems limited, this may be due to its attention to the hierarchy of relationships (i.e primary and secondary).*"B" is the only one I called my girlfriend and uh... "K", we refer to each other as partner. "V" and I refer to each other as bou."* (D, 28 M)

Compersion is significant to maintain a harmonious relationship among the paramours (partner) and metamours (partner's partner).To set boundaries or rules wherein all parties involved will respect and have a fulfilling experience in the polyamorous set-up.

"Starting polyamory in the first place was a weird for us. We began with a set of rules. The set of rules reads like a constitution. May definition of terms pa, "here in, hereto for" mga ganoon terms but now were more flexible rules are: not to have sex on the first date, send a selfie when you are out on a date, make time to talk to "B" in a certain point in time during the day, siguro kahit late na kung lalagpas ng 11 PM. And... when I was dating at first everything was predicated upon the fact that we had to be ready for it" (D, 28 M)Wolfe (2003) have concluded that polyamorous individuals who has love for each of their partner is revealed to have a statistically significant level of compersion.

Depending on the structure of their relationship some polyamorous individuals constantly communicate with their paramours and in dealing with situations wherein they are affected by the metamours.

Theme 2: Phases of the polyamorous relationship

The *phases of the polyamorous relationship* consist of the lived experience of the individuals engaging in polyamorous relationship. The researchers used the term "phases of the polyamorous relationship" to define the experience of the participants with regards to the how the polyamorous set-up have begin, the challenges they have encountered, the ways on how the participants coped with the said challenges, and their plans for the future. The phases was coded according to the: contemplating of the kind of relationship, challenges, coping strategies, and the plans for the future.

Sub-theme 3: Contemplating of the kind of relationship

In this study, the *contemplating the kind of relationship* refers to the experience of the individuals engaging in polyamorous relationship where they have started to contemplate about themselves and their relationship. The contemplating the kind of relationship covers the feelings, emotions, actions and decisions they made before and during the start of the relationship.

"She is finding herself attracted to girls and when she told me about that. Instead of being jealous, I want her to pursue it. Me, I have resigned myself to a monogamous lifestyle, but she was like "No, this is beautiful. Let's explore" ... Somewhere around that [time] we were exploring, we were reading about different relationship structures, alternate relationship structures and around that time polyamory almost [felt] like an orientation. Learning about it made me feel like I was not a bad person for wanting to be with other people but not necessarily falling out of love with my girlfriend. So... yeah, here we are 3 or 4 years in our polyamorous relationship. " (D, 28 M)

The participants started their polyamorous relationships in different ways. Most of them have started to be in a monogamous relationship and eventually transitioned into a polyamorous relationship. *"I always like [to] date people and enter in serious monogamous relationship but I always feel this weird feeling that I wanted more but then I never felt that my partner wasn't enough... So I decided to offer my partner to be polyamorous. "Can we be polyamorous? Can we try this?" and as soon as we tried it, our relationship has changed like 180 degree shift, it became a positive. I felt so much lighter, I felt so much enthusiastic, more excited, more open to my long term partner and I feel it's because all of the burden of expectation that I was putting on one person was now divided, right? But also I feel like all of the affection that I have, that I wanted to give was now being like shared properly." (H, 23 F)*

People can be true to themselves when they have freedom of expression of their self and with the emergence of new intimate relationships, individuals will be able to express what they really want without the restriction of feeling any sense of shame. The participants stated that they wanted to be transparent to their partner about wanting more because they want to tell the truth so they will not hide their desire to themselves and their partners. Supporting this act, Schmid in 2001 stated that the outer, relational dimension of it is well characterized by the term transparency which stands for the correspondence of experience and communication towards others.

Sub-theme 4: Challenges in the relationship

Challenges in the relationship refers to the experience of the individuals engaging in a polyamorous relationship that have challenged their relationship. The *challenges in the relationship* includes different problems, feelings, emotions and insight of the participants. As the relationship develops, the participants stated they have encountered challenges. These includes time and money management, communication, setting boundaries in their relationships, and the perception of their environment towards their relationship. People in a non-monogamous relationship particularly based from the statements of the participants have encountered different and uncommon challenges which are related to the structure of the relationship. Some of these are: communication, perceptions of the environment, boundaries, time and money, issues related to differential personal growth, age, demanding partners and problems with metamour.

"Well there is time and money management. [and] of course emotional management… Managing the emotions of more than one person and not to leave them out, that is difficult" (D, 28 M)

Many of the participants said that they value openness between themselves and their partners, thus it becomes a problem whenever their partners would limit such interaction; they would often acknowledge those thoughts and emotional challenges associated with it, thus they exert more effort to acknowledge each interactions with their partners. The participant stated that time and money management are apparent.

Time management was a challenge because the participant's paramour are either working or still studying. It has been a challenge for all of their partners to meet and meet all of the participants in a week. Travel expense, food expense, gifts and money for texting and mobile data are some of the reasons for having a money management problem.

"It wasn't really like he's lying or he was being dishonest but like, he was emotionally repressive. So I could not accurately gauge how bad he was feeling or how good he was feeling. So, regardless of being positive or negative, I could not read him. And then I would always pry the information out by asking [him] over and over. It puts a lot of emotional stress on me because if he's happy I can't tell how much, if he's sad I can't tell how much and I need that information so that I know how much emotional labor he demands. I didn't know, how much emotion to deposit into our interaction." (H, 23 F)

"He lied to me, a lot, he has another partner named "J", and the conflict arise, arose from when, he would tell me something different and he would tell [his other partner] something different… "F" and "J". When they wouldn't be honest, when they would trash talk, when they would compare your other partners with themselves… and they would gaslight you, ganoon. It's really not healthy to compare your partners with each other because for one thing. They offer different things from other partners because they are different people." (K, 23 F)

The participants' have also expressed their concern with setting the boundaries with their relationship.

"Alam mo yung medyo masyado siyang umaasa sayo, more than you can give to, pero hindi, she pretends like it's okay. Like, when I tell her the truth, when I said boundaries over our relationships and I'm actually on the verge of ending this relationship." (D, 28 M)

"Bawal magselos? Well, hindi naman bawal pero dapat ma-manage nang maayos yung pagseselos. Concept of possession, yung mga ganoong klase. That's another challenge, poly-mono relationship are so hard, well not so hard. Since you have different standards set in the relationship." (D, 28 M)

While the participants' have also shared the perceptions on how their immediate environment reacted to their setup.

"That they will probably react like how my ex-partner's mom reacted to the to this. "Haliparot ka!" or something so they'll still shame me about it." (K, 23 F)

"Some of them react with a level of judgement of course. I got asked "Isn't she enough?" At one point in my life, but it was her [my partner's] idea. and a lot some of people think it's all about sex. Threesomes, orgies, well that's a part that not THE part; that is not the reason. (D, 28 M)

"His mom found out and she was so mad, she was like you deserve more, ganon, like, you don't deserve somebody who's like sleeping with other people or who are in relationship with other people. You deserve the wholeness." (K, 23 F)

This affirms that the relationships formed by participants are perceived by their environment as a relationship that is simply an excuse for sexual activities and their partners is not enough to satisfy their needs.

Sub-theme 5: Coping strategies

The *coping strategies* refer to how the individuals engaging in polyamorous relationship have dealt with the challenges they encountered effectively. This strategy is based on the participants' statement that happened after they have demonstrated strength in facing their problems with the emotional, social and relational concerns. Prior to these challenges in the relationship, the participants have stated different coping strategies to resolve the different challenges (relational, social and emotional concerns). These includes openness, honesty, validation of feelings, time management and money management. When a problem arises in a relationship, one participant stated that:

"So, I think that's the most important part about polyamory and how it works is that there is so much open communication involve, so much transparency na everything is discussed beforehand, and during and after. Its like its very conscious consent at all times. And it shouldn't feel tiring, it should feel good to know that your paying careful attention to your partner needs" (H, 22 F)

This support the claim of Johnson (2013) where he stated that some individuals are seeking for some openness and honesty in a relationship that is common in a polyamorous relationships. Hence, the openness in the polyamorous set-up is a coping strategy for the participants' to have a harmonious relationship and prevent conflict by acknowledging everyone's concern.

"Intense time management and emotional management. Sometimes kasi you get cold between partners with not necessarily siding with views or goals, but it's a struggle sometimes. Financially, you do have to manage your shit, you have to maybe not going out with so many people, totoo yan. Making money or at least-which is not to say polyamory is just for the privilege you just have to deal with the manage. Manage your money well, i noticed a lot of polyamory people are KKB people talaga when going out so ayun. Emotionally, i just generally try to reach a comfortness." (D, 28 M)

Based from the statements of the participants, polyamory can be a beneficial set-up. Since the number of their partners can provide forms of emotional, social and spiritual support and this would allow the individual and the partner's ability to cope effectively in times of crisis.

"With my partners, kapag may bagay na we disagree with. We still listen to each other like kunyare kapag ayaw mo nito, so tatahimik ako, papakinggan ko siya. Tapos sasabihin ko na "Ah ayoko nyan, kase ganito ang tingin ko." Tapos sasabihin niya "but I see it this way" tapos ako "but i see it this way" tapos parang "yeah, we have different views" ganun lang. Sa kanilang dalawa na yun. Sa romantic partner ko, usually kasi hinde. Hindi siya nag a-agree saken eh. Like pag may different views kame... one of us is the same den. We listen to each other tapos i-eexplain namen kung anong pagkakaintindi namen tas yung misconception about doon. Lilinawin ng isa. Tapos, yeah we can agree naman. Yun lang naman." (W, 22 F)

"In fairness wala masyadong selos, kase feeling ko magkakaroon ng struggle lalo kapag may magseselos. So far wala naman talaga kase nagtatanong din ako kung any of them "uy platonic two, nagseselos kaba kay platonic one" ayun. I do point that from time to time. Dahil syempre ayokong may mailang sa kanila na may maleft out. So far, wala masyadong struggles and conflict" (W, 22 F)

Based from the study of Deri (2012), jealousy is a result the insecurities formed from oneself or as a result of their society, in contrast to it being gained for the presence of another lover. As such, the polyamorous individual is still responsible for their own emotions and they would always support their partners to handle such negative emotion. For example, the polyamorous individual would ask questions to their paramours and talk to them to reassure them that having another partner would not make them love less.

"Reassurance of course. "Nothing is being taken away, nothing is going to leave." Which is the core idea of polyamory anyway. "Wala namang nawawala sa iyo, hindi naman ako nawawala and hindi naman nawawala ang pagmamahal ko sa iyo dahil may gusto akong iba"... [Also] meeting the other person helps, it helps kasi when I think about jealousy "it often feels like you created a construction of another person in your head" and meeting ba the person often disassociates, it makes them real. It sort of gives you a reassurance na "Oh, they are not here to take, take my partner away." (D, 28 M)

Sub-theme 6: Plans for their future

In this study, *plans for the future* refers to how the participants plans in the future regarding themselves and their relationship set-up. These covers the plans on how they would handle their career and relationship in the future. The researchers gathered different responses ranging from:

One of the participants have stated that he see himself marrying one of his partners and that he sees something long term with his other partners stating that,

"I see myself definitely marrying "B", I see something long term with "V". Funny thing about "V" she is monogamous, so she is only dating me but I also see something long term with her I say it is early for to me say marriage but I all relationships have a track and it think it's on that track. (D, 28 M)

Furthermore, stating that since his partners have a good relationship with one of his primary partner, he sees it as something that could be around forever. Along with his other partners to whom he considers as close friends. Lastly, "D" have stated that unfortunately, not all relationships are worth maintaining.

With "K" I can see [her] being around forever, because we are in such a good relationship. She and "B" have a good relationship so yeah nandoon. "S" and "L" are both very close friends, hindi mawawala yon. "M"... well, not all relationships are worth having." (D, 28 M)

"Kaya from five years from now, di pa ko sigurado... pero sigurado na ko na naka-graduate na ko at kame. Dapat. So ayun. Parang anlabo no? mas okay pa sa platonic [partner]. Pero ayun, hindi rin kasi siya sigurado sa future niya. Sige, no rush naman." (W, 22, F)

"This is my personal outlook because I know other polyamorous couples would want to settle down, get married and still be in a polyamorous setup and that is something that happened. But personally I'm not very keen on getting married, if I were to look at my future I would see myself on multiple long term partnerships but none sealed in matrimony and my primary focus is more on my career it's not really a product of my set-up, it's really a response to my set-up either because marriage and polyamory can work, it happens to some people. It's a part of who I am as a person, I am very career driven and I don't see an appeal in marriage. So even if I were monogamous it would be the kind of the future that I want." (H, 23 F)

This concludes that some of the participants are planning to settle down in matrimony while keeping their polyamorous relationships. While loving multiple partners, some of the participants have a primary partner in their relationships thus, planning to settle down with their primary partner while maintaining a romantic or platonic relationship with their other partners.

This affirms the statement of Johnson (2013) that polyamorous individuals may rather chose marriage with their partner since the legalities surrounding such relationship is discouraged. Some of the concerns surrounding the legal concerns are the laws on marriages, adulteries, bigamy, custody cases, and could often lead to them being discriminated in their place of work.

One participant stated that she would rather focus on her career or studies while maintaining their polyamorous relationships, and while some are still uncertain on what their future holds.

DISCUSSION

Polyamorous relationship have started to emerged in the Philippines. However, little attention has been given to the lived experience of Filipino individuals engaging in polyamorous relationship in the Philippines. In connection to the assumptions of the researchers; the peers, family, and the people in the environment of the people are familiar with the idea of non-monogamous relationships but they tend to associate it with infidelity. The participants stated that people in their environment tend to assume and fail to understand the difference of the different forms on non-monogamous relationship which may lead to an immediate disapproval or discrimination in their relationship set-up. The participants' also belong to the middle-upper class based from their socioeconomic status and the researchers found that the difficulties in the polyamorous set-up includes: time, money and emotional management to all the parties involved.

In the first theme "Structure", the researchers were able to see how the participants have described the nature and structure of polyamory in the Philippines. It showed that polyamorous individual have identified that they are polyamorous and treat polyamory as an orientation. The participants have emphasized that being polyamorous is something they have decided on their own. Moreover, a polyamorous relationship would only function well if all of the parties involved would be completely open and honest to one another. It is distinguished that polyamory has a presence of communication between partners (Hymer & Rubin, 1982; Brandon, 2016).

The second theme "Phase of polyamorous relationship" highlighted the sub-themes which include the beginning of the polyamorous set-up, challenges encountered by polyamorous individuals, the coping strategies, and their plans for the future. The challenges the participants stated is not on the set-up of the relationship itself but on the time management, environments' reaction to the polyamorous relationship and the stigma associated with it. the analysis showed how the participants have cope to the challenges which they encounter in their relationship. It highlighted how the polyamorous individuals have work and solved the problems that they have faced and are currently facing.

Despite the positive characteristics of polyamory, there are many different relationship, emotional and social problems concerns that polyamorous individuals are facing (Weitzman, Davidson, & Phillips, 2012). The participants of the study have identified several relationship concerns such as: Time and resources, sex and integrating new partners with family and friends. Moreover, these matters which require a better planning and processing in a polyamorous relationship (Weitzman, Davidson, & Phillips, 2012). The participants' emotional concerns involves an internal conflict within themselves because most of the participants have been raised and the idea of having only one partner is the ideal relationship that they knew. Therefore, when they felt that they wanted more and they wanted to share the love they have to more people, they became confused and thought that there were something wrong with them but once they challenged the monogamous social norm and become open about their feelings and desire, they felt overwhelmed and free. Different social concerns have been identified by the participants such as discrimination by the mainstream society and family disapproval, fear of disapproval by their families, fear of disapproval and being declined which may lead to make effort to keep their relationship set-up a secret.

Relating the theoretical framework to the results, the theory views the relationships formed in polyamory as a means of maximizing the rewards while minimizing its cost. Furthermore, based from the concept of the comparison levels (CL), as a reference point for the expected outcomes from a global standpoint and the comparison levels of alternatives (CLalt) represents the alternatives that can be done to obtain something. Comparison level involves the expectation of a partner (Thibaut & Kelley, 1959). It involves what they are expecting to receive in a particular relationship and such expectations are being compared to the person's view of how a relationship would be or by the expectations of the society regarding a relationship meanwhile comparison level of alternatives tackled the connection between the "give and take" in the relationship to determine one's satisfaction and commitment to their partners. The researchers viewed that interdependence theory can be used to explain the participants' behavior. Since that the comparison level concerns, what they want or what they can get from the relationships. While the comparison levels of alternatives represents the alternative ways on how to achieve such wants. Based from the experience of the participants instead of choosing to leave and exchange their partners to achieve such wants the participants opted to create a set-up wherein they can maintain a harmonious relationship with their partners through communicating their concerns and negotiating what they want to achieve in their relationship. Furthermore, the theory relates to the structure of the participants goals and drives towards the relationship (Rusbult & Van Lange, 2002). Specifically, the theory focuses on understanding the different issues or possibilities in their set-up. It is concerned on how it would both be benefiting them while minimizing the cost that could be gained from it and if their partners are going to become responsive to such benefits and on how the relationship would adapt to such situations (Holmes, 2002; Kelley, 1984; Rusbult & Van Lange, 2002).

Similarly to the statements of the participants, the agreements formed in the structure of relationship would provide rewards towards the authenticity of their feelings and at the same time expressing it openly to their partners. Additionally, they would want to evoke more feelings of compersion towards their partners and by having multiple committed relationships would offer a chance to elicit such emotion.

Implications

The result of the present study provides a better understanding of the concept of polyamory in the Philippines. This research contributes on how the polyamorous individuals have experienced, as well as the description of their relationship, challenges and coping strategies in the relationship. It can also facilitate an increase in the body of knowledge in terms of contextualizing polyamory and fill the gaps in literature especially in local literature. Practically, the research can serve as a foundation for future endeavors in expanding the knowledge pertaining to the experience of polyamorous individuals in the Philippines. The study can be used as information in creating tools that could help other researchers in completely capturing their experiences and in the creation of such tools it could also help in dealing with polyamorous individuals' concerns about their lifestyle, relationships, emotional and social concerns with regards to the educational, clinical, and industrial setting.

RECOMMENDATIONS AND LIMITATIONS

There are a few limitations that need to be taken into consideration. First, this study is limited by an exclusive reliance on self-report measures. The participants may have felt obligated to represent polyamory positively and may thus have inflated their self-reported perceptions on the interview. The second limitation involves the scope of the current study. In this study, the researchers sought to examine the formation, their struggles which can include how they maintain the relationship, and lived experiences of polyamorous individuals in the Philippines. Moreover, the informants for the study which has been involved in a polyamorous relationship had to be together at least a year to assume that only committed couple participated in the study (Kessler, 2015). For future research, it would be recommended to apply different forms of data gathering aside from using interview for the participants. Focused group discussions would also be an effective way to gather data in order to confirm the statements of each participants in one discussion. This way, the researchers can be completely immersed in the experience of each participants in the study. The findings of the current study cannot be used to generalized all polyamorous individuals. Given that the participants in the study was found in the National Capital Region (NCR), participants from other regions of the Philippines may have different experiences in their polyamorous relationship and a large sample of participants should be needed for future study in order to capture the full essence of the polyamorous relationship in the Philippines.

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OCCUPATIONAL STRESS, ORGANIZATIONAL COMMITMENT, WORK ENGAGEMENT OF STEM TRACK PUBLIC SCHOOL TEACHERS: A PROPOSED EMPLOYEE WELFARE PROGRAM

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ABSTRACT

This descriptive-correlational study aimed to assess the occupational stress, organizational commitment and work engagement of teachers in public senior high schools in NCR offering STEM program. Frequencies, percentages, means and standard deviations were used in presenting the descriptive statistics. Confirmatory Factor Analysis (CFA) for verifying factor structures, Mann-Whitney and Kruskal-Wallis for testing differences, and Structural Equation Model (SEM) for determining the relationships of the latent variables were also utilized. The results revealed that teachers have moderate to high level of occupational stress. They also have high levels of organizational commitment and work engagement. Additionally, significant difference was found in the teachers' level of occupational stress when they are grouped according to age generation and years of service. Significant difference was also found in their levels of organizational commitment according to years of service and in their levels of work engagement according to age. The results of Structural Equation Model revealed that negative correlations of occupational stress to organizational commitment and work engagement, and positive correlation between organizational commitment and work engagement are all significant. Aside from the contribution of the study to the body of knowledge, the results of the study will be significant to administrators and policymakers for creating programs, activities, and policies that will help improve the teachers' welfare.

KEYWORDS: Occupational stress, organizational commitment, work engagement, STEM track teachers, structural equation model, confirmatory factor analysis

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INTRODUCTION

Many countries are allocating significant portion of their budget for education. Education is one of the major factors that contribute to economic growth (Hanushek & Woessmann, 2010) and it plays a very significant role in reducing development gap of countries in ASEAN region (ASEAN State of Education Report, 2013).

Quality education is possible if there are competent teachers who are motivated, committed, and willing to engage. Teachers who are the main actors in delivering quality instructions deserve considerable attention. Policies, programs, and other activities that will help improve their welfare should be taken into consideration. Teaching is being considered as a noble profession (Muthuvelayutham & Mohanasundaram, 2012).

However, it is still a problem on how to encourage potential students to pursue teaching career. Aside from the fact that teaching profession is not financially rewarding, there are other reasons why it is not attractive to many people.

According to Jackson and Rothmann (2006), teaching is a demanding profession. It is one of the most stressful professions (Kaur, 2011; Kokkinos, 2007) that received great attention (Lazuras, 2006) and now becamea major field of interest in research (Antoniou, Ploumpi, & Ntalla, 2013). The study conducted by Aghar (2008) revealed that high school teachers in Tehran are experiencing moderate to high level of stress. High level of stress was also experienced by California teachers (Richards, 2012) and Chinese teachers (Yang et al., 2009). According to Yeboah and Ansong (2014), sources of occupational stress in the workplace are work demand, control, support, role, change, and relationship.

Several studies about the relationships of occupational stress to organizational commitment and work engagementwere already conducted. Harun et al. (2014) determine the relationship between stress and organizational commitment and found out that they are negatively correlated. This was supported by the study conducted by Alipour and Monfared (2015) who also found out that job stress is inversely related to overall organizational commitment and its dimensions such as affective, continuance, and normative commitment.

Additionally, job stress is also negatively correlated with work engagement (Derbis, 2012),which was supported by the study of Ramos, Alés, and Sierra (2014) who also found out that stressors such as role conflict and role ambiguity are negatively correlated to work engagement.

Research findings showed that greater part of teachers' occupational stress is related to rapid pace of changes in education (Muthuvelayutham & Mohanasundaram, 2012). The K to 12 program, which was implemented in the Philippine educational system last 2012, created a lot of adjustments not only on the part of the government but also to all stakeholders. According to Tan (2017), Filipino teachers are experiencing occupational stress due to different personal- and school-related factors such as low salary that is not enough for their financial needs, high job demand, attendance in meetings, absence of congruency among their personal goals, the goals of the institution, and the department where they belong. However, high stress level of the teachers is also due to the absence of proper consultations regarding the changes, no authority to make decisions, lack of resources, and limited access to professional development (Agai-Demjaha, Minov, Stoleski, and Zafirova, 2015).

The Department of Education (DepEd) created a "Conceptual Framework for Basic Education Research Agenda," which consists of different research agenda that will help the agency gather information needed for formulating evidence-based policies, plans, programs, projects, and other activities (DepEd Order No. 39, s. 2016). One of the research agenda is on human resource development that gives emphasis on employees' welfare. The agency needs basis for determining capacity building activities and mechanisms most appropriate in promoting teachers' welfare that will sustain their commitment and work performance. The poor performance of the students in the National Achievement Test and other assessments such as Program for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) (Care et al., 2015) served as basis for choosing the public STEM track teachers who are the key players for advancing mathematics and science education.

The study assessed their levels of occupational stress, organizational commitment, and work engagement in order to provide information that are needed in creating evidence-based policies, plans, programs, projects, and other activities needed for improving the welfare of the teachers as stated in the DepEd Basic Education Research Agenda (BERA). Furthermore, the relationships of these latent variables and connections to their personal factors were also explored.

The study is significant in the field of research due to its contribution to the body of knowledge about the occupational stress of senior high school teachers and how it is related to their organizational commitment and work engagement. Results of the study are very useful for policy makers and administrators in creating policies, programs, and activities that will help improve the welfare of the teachers and for further improvement of the K to 12 implementation.

LITERATURE REVIEW

Studies were already conducted about the relationships among the teachers' level of occupational stress, organizational commitment, and work engagement. Differences in the teachers were also explored considering some personal characteristics.

Theoretical Framework

The study utilized the Job Demands-Resources Model (JD-R) to determine the relationship of occupational stress to organizational commitment and work engagement. The job characteristics were measured depending on how stressful the job demands (demand factor, role factor, and change factor) and the resources (control factor, support factor, and relationship factor) in the workplace. A lot of studies showing the effectiveness in predicting important characteristics of the employeeswere already conducted. The model was used to predict employees' burnout and performance (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), as well as to highlight the strengths and weaknesses of individuals, work groups, departments, and organizations as a whole (Bakker & Demerouti, 2007). It has been established that different job resources have an effect on the employees' future work engagement, which, in turn, can predict their organizational commitment (Hakanen, Schaufeli, & Ahola, 2008).

In this study, JD-R model was used as the framework for measuring occupational stress and extending it to see how it is related to organizational commitment and work engagement of the employees.

Occupational Stress

Every employee is experiencing stress in their work. It happens when the work demand does not match the employees' ability to perform and fully accomplish the work assignment (Kaur, 2011). Stress is also the result when too much pressure at work is not properly handled (Muthuvelayutham & Mohanasundaram, 2012).

There are different factors that are associated with occupational stress (Antoniou et al., 2013). Previous studies revealed that stress is the result of role overload, role insufficiency, social support, monthly income, and role limitations (Sun, Wu, and Wang, 2011), as well as performance pressure (Ahsan, Abdullah, Fie, & Alam, 2009; Iqbal, Khan, and Iqbal, 2012).

Tytherleigh, Webb, Cooper, and Ricketts (2005) revealed that job insecurity is the most significant source of stress of employees in higher education, while Wu, Zhu, Wang, Wang, and Lan (2007) found out that the most significant predictors of emotional exhaustion are role overload, responsibility, role insufficiency, and self-care. Other factors that may cause stress are physical condition of the workplace (Tiwari and Mishra, 2008), interpersonal relationships (Mokdad, 2005), organizational constraints and interpersonal conflicts (Mazzola, Schonfeld, & Spector, 2011), and work demand, control, support, role, change, and relationship (Yeboah & Ansong, 2014).

Teaching as a noble profession (Muthuvelayutham & Mohanasundaram, 2012) is now becoming demanding and more complex (Jackson & Rothmann, 2006). It is being considered as one of the most stressful professions (Kaur, 2011; Kokkinos, 2007). Teachers' stress received great attention (Lazuras, 2006) and becomes major field of interest in research (Antoniou, Ploumpi, & Ntalla, 2013). A lot of researches about occupational stress of elementary and secondary school teachers were already conducted (Pei & Guoli, 2007). In Turkey, teachers experienced mild level of stress (Eres & Atanasoska, 2011), while Macedonian teachers have moderate stress levels. Secondary school teachers in Tehran are experiencing moderate to high level of occupational stress (Ahghar, 2008). High level of stress was also experienced by California teachers (Richards, 2012) and Chinese teachers (Yang et al., 2009).

Occupational stress must be given considerable attention due to its effect to physical and emotional conditions of teachers that could affect their level of commitment and work engagement. Meams and Cain (2003) pointed out that stress can result to burnout and affect the teachers' decision to leave the profession. Therefore, there is a need to analyze the personal and social characteristics of the employees including their working environment, which could contribute to their occupational stress (Eres & Atanasoska, 2011). Proper stress management is necessary to lower its adverse effects on employees' commitment and their performance (Alipour and Monfared, 2015). Programs such as psychological counseling should be provided to help teachers on how to manage their stress (Yang et al., 2009).

In the Philippines, stress level of elementary and secondary school teachers is relatively high. This is due to many work-related factors, such as too many paper works, additional non-teaching-related activities, crowded classes, and incompetent superiors; personal factors, which include relationships; and economic factors, which involve inadequate salary and high cost of living (Mingoa, 2017).

Several studies focusing on some personal characteristics that are significantly related to occupation stress were conducted. It had been posited that female teachers experience higher occupational stress than their male counterpart (Antoniou et al., 2013; Yang et al., 2009). Alternatively, there were also studies that point to male teachers having more occupational stress (Afrab & Khatoon, 2012; Eres and Atanasoska, 2011) but no significant difference for male and female teachers in Macedonia (Eres & Atanasoska, 2011). Additionally, gender was established not a significant factor in teachers' job stress (Darmody & Smyth; 2011).

Aside from gender, teachers' years of service was found not significantly related to occupational stress (Antoniou et al., 2013; Eres & Atanasoska, 2011). However, this is contrary to the finding in Turkey where teachers who are teaching for at least 21 years are experiencing lower level of stressthan those who have been teaching for 10 years or less (Aftab & Khatoon, 2012).

There are contrasting results on the effect of age in occupational stress. Darmody and Smyth (2011) proved that those teachers who are in their forties are experiencing higher level of stress, while Chaplain (2008) claimed that as stress scores increased with age, these increases are not significant. İpek et al. (2018) found out that teachers from the 22 – 30 age group are experiencing the highest level of occupational stress, while teachers from 41 – 50 age group are the ones experiencing the lowest level.

Other variables were explored by Eres and Atanasoska (2011) who found that monthly salary and educational background are not significantly related to occupational stress. However, Lunau, Siegrist, Dragano, and Wahrendorf (2015) revealed that teachers with lower education are experiencing higher level of stress. In view of the foregoing discussion, it is hypothesized that

H1: *There is significant difference in the teachers' level of occupational stress according to their profile.*

Organizational Commitment

Organizational commitment is considered as one of the major interests of researchers in the field of organizational behavior and human resources management (Tella, Ayeni, andPopoola, 2007). Organizational commitment refers to a person's attitudes and attachment towards their organization (Ariani, 2013), and is "a person's dedication to a person, job or organization that drives him to face all the challenges in the workplace" (Tolentino, 2013). It is the "employees' desire to give power and responsibility for the welfare and success of the organization" (Chairuddin, Riadi, Hariyadi, & Sutadji, 2015).

To be more effective, an organization should create a spirit of cooperation and develop the employees' sense of commitment in the workplace (Tella et al., 2007). There are those who claimed that organizational commitment has three components: affective, normative and continuance commitment (Meyer & Allen, 1990, as cited inKhatibi, Assadi, & Hamidi, 2009), while Delobbe and Vandenberghe (2000) claimed it has four factors, namely affective, continuance, internalization, and compliance commitment.

Opportunities for professional growth and participation in decision-making may contribute to the teachers' commitment to their organization (Bogler and Somech, 2004) while giving appreciation to major accomplishment of the employees is necessary to build a strong commitment that will contribute to the achievement of the university's vision and mission (Bay, An, & Laguador, 2014).

Previous researches indicated that there are personal factors associated to organizational commitment. Aydin, Sarier, and Uysal (2011) found out that gender is significantly related to organizational commitment where male have higher level of commitment indicating that male teachers can adapt easily to the organizations' norms and values.

However, Al-Ajmi (2006) found no difference in the organizational commitment of male and female government employees in Kuwait, which is consistent to the findings of Naderi (2012). Additionally, Wong and Tong (2014) revealed that gender is not significantly related to organizational commitment, age is significantly related only to passive continuance commitment, education is significantly related to passive continuance commitment and normative commitment, and monthly salary is significantly related to passive continuance commitment. Farooq and Zia (2013) found out that the university teachers have medium commitment level.

They also found out the male teachers are more committed to their organizations as compared to female teachers, which issimilar to the findings of Hulpia, Devos, and Van Keer (2009). Personal factors suspected to be related to organizational commitment of senior high school teachers were investigated to determine effective mechanism on how to further deepen their commitment to their respective organizations. Thus, it is hypothesized that:

H2: *There is significant difference in the teachers' level of organizational commitment according to their profile.*

Studies were already conducted on the relationship between occupational stress and organization commitment. It has been established that job stress is negatively correlated with organizational commitment in the banking sector employees that caused a decrease in their commitment (Bhatti et al., 2016), as well as among nurses in hospitals (Alipur & Monfared, 2015), and oil company employees are stressed working long hours in a remote and risky environment (Harun et al., 2014).

Negative significant relationship between the affective and normative dimensions of organizational commitment and job stress was also established among employees of National Olympics and Paralympic Academy (Khatibi et al., 2009). Additionally, the physical and health-related stress among railway employees can be used as predictor of normative, affective, and overall organizational commitment of the employees (Tiwari & Mishra, 2008).

In contrast, among employees of multinational company in Malaysia and Pakistan, although overall job stress and its dimensions, such as work overload, work ambiguity, work conflict, and resource inadequacy, are not significantly correlated with organizational commitment, organizational commitment moderated the effect of job stress to employees' performance (Jamal, 2011). Additionally, job stress and organizational commitment of employees who are taking further studies in the university were found to be positively correlated (Tang, 2008). Continuous and affective commitments were found to be positively related to job stress (Ziauddin, Khan, Jam, & Hijazi, 2010). Also, it was established that employees with high organizational commitment do not always have low work stress level (Bytyqi, Reshani, & Hasani, 2010).

In the case of senior high school teachers, there is a need to determine not only their occupational stress level but also its association to organizational commitment. Thus, the following is hypothesized:

H3: *There is significant negative relationship between occupational stress and organizational commitment of the respondent-teachers.*

Work Engagement

Engagement is a motivational construct that can be shared by employees in the workplace (Ariani, 2013). Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) described it as the "employees' positive and fulfilling work-related state of mind characterized by vigor, dedication, and absorption."

According to Karatepe and Olugbade (2009), age, gender and education are not significantly related to work engagement of employees. Likewise, found to be not significantly related to work engagement is gender (Torrente, Salanova, & Llorens, 2013) and educational level (Lawrence, 2011).

Agarwal, Datta, Blake-Beard, and Bhargava (2012) revealed that male has higher level of work engagement compared to female, while Mauno, Kinnunen, and Ruokolainen (2007) found out that women felt more absorption and vigor than men.In some studies, age is found to be significantly related to work engagement (Shimazu & Schaufeli, 2009), and that there is a significant positive relationship between age and work engagement (Bezuidenhout & Cilliers, 2011; Schaufeli, Bakker, & Salanova, 2006).

According to Bay et al. (2014), enough services provided to teachers can lead to better work engagement. High level of employees' work engagement can bring greater commitment (Alzyoud Othman, and Mohd Isa, 2015), and that engagement predicts various work outcomes such as job satisfaction and intent to quit (Burke and El-Kot, 2010).

Ariani (2013) also found out that employee engagement is positively related to individual job performance of the employee. Because of the positive and beneficial consequences at the individual and organizational levels (Alzyoud et al., 2015), assessing the employees' personal characteristics together with their work engagement is necessary in order to generate information that can be used as basis for creating programs that will help improve work engagement level of the employees. Thus:

H4: *There is significant difference in the teachers' level of work engagement according to their profile.*

Occupational stress may also be related to work engagement. In the workplace, stress is one of the factors that negatively affect the work engagement of the employees (Iqbal et al., 2012). Stressors such as role conflict and role ambiguity are negatively correlated to work engagement (Derbis, 2012; Ramos, Alés, and Sierra, 2014), while job insecurity significantly affects work engagement and burnout (Bosman, Rothmann, & Buitendach, 2005). Job stressors arealso positively correlated with burnout (Derbis, 2012).

Padula et al. (2012) found out that occupational stress is significantly related to work engagement and it influenced how employees deal with work frustrations. There is also a significant relationship between job stress and different dimensions of employee engagement (Iqbal et al., 2012) and a significant association between employees' different sources of job stress and levels of work engagement (Coetzee and De Villiers, 2010). Thus, the importance of minimizing stress in the workplace is emphasized in order to encourage more engagement from the employees.

Hakanen, Bakker, and Schaufeli (2006) investigated teachers' burnout and work engagement and found out that the effect of job resources to organizational commitment is mediated by work engagement. Job resources, such as autonomy, performance feedback, and social support, were found to be all significant factors affecting the work engagement of academicians (Alzyoudet al., 2015); thus, they have to be given importance to help improve their work engagement.

On the contrary, Rothmann (2008) found out that job demand being considered a job stress is not significantly correlated to work engagement, specifically to vigor and dedication, and that lack of support, another stressor, is negatively correlated with vigor and dedication. This implies that support to the employees should be taken seriously in order to improve their work engagement. Further, the influence of organizational support to work engagement is not significant while work engagement of the employees is significantly influenced by supervisors' support (Chairuddin et al., 2015). This means that supervisors and managers who are in direct contact with the employees play an important role in helping the organization to encourage the employees attain their highest level of work engagement.

For senior high school teachers, assessing their occupation stress is necessary in order to create programs that will improve their work engagement. Thus:

H5*: There is significant negative relationship between occupational stress and work engagement the respondent-teachers.*

Organizational commitment and work engagement are important factors that must be given attention by organizations in order to meet the desired performance of the employees. Previous studies revealed that work engagement has significant influence on the employees' organizational commitment (Chairuddin et al., 2015; Beukesand Botha, 2013). It was also established that employees with high level of job and organizational commitments will also have high level of affective and normative commitments (Albdour & Altarawneh, 2014). Additionally, high level of job engagement can significantly affect the continuance commitment of the employees (Albdour & Altarawneh, 2014).

A comparative study about the work engagement and organizational commitment of employees working in private and public sector organizations in Ghana revealed that significant positive correlation exists between work engagement of the employees and their commitment to the organization (Agyemang & Ofei, 2013). This indicates that employees with higher level of work engagement also have higher level of organizational commitment.

Considering the significant relationships among the employees' organizational commitment, career satisfaction, and engagement, stronger relationship exists between employees' organizational commitment and their engagement (Khalid et al., 2015).

In the higher education institution in South Africa, it was established that significant relationship exists between affective commitment and work engagement, and that work engagement can be used as predictor of affective dimension of organizational commitment (Field & Buitendach, 2011). Eghlidi and Karimi (2016) surveyed female employees who are working in a university and found that among the three dimensions of work engagement, work dedication is the best predictor of employees' commitment to the organization. Additionally, it was posited that the relationship between affective commitment and job performance is mediated by work engagement, and work engagement also mediates the relationship between job satisfaction and intention of the employee to quit (Yalabik, Popaitoon, Chowne, & Rayton, 2013). In view of the different findings, it is hypothesized that:

H6: *There is significant positive relationship between organizational commitment and work engagement of the respondent-teachers.*

Conceptual Framework

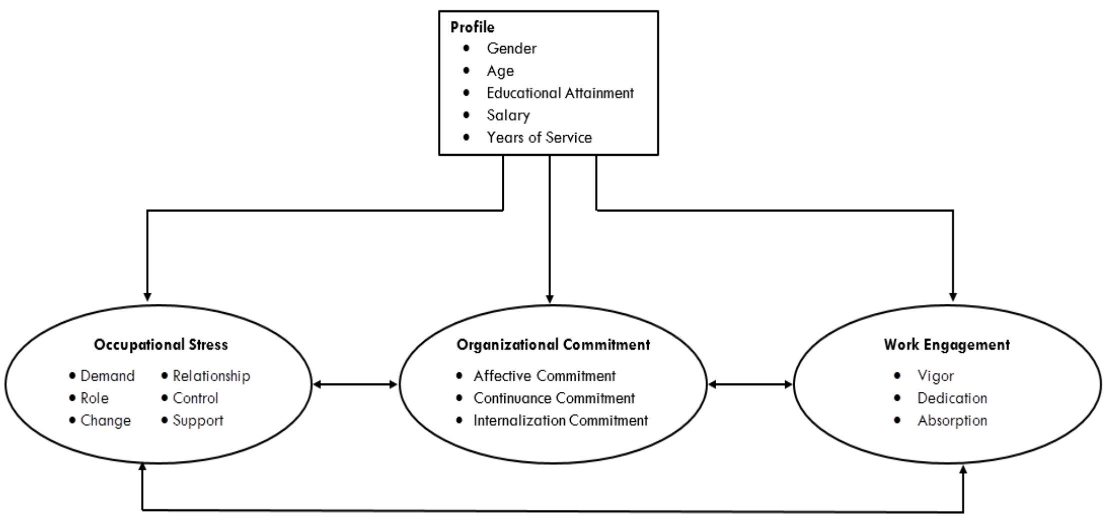

Figure 1. A Model Showing the Relationships of Occupational Stress, Work Engagement, and Organizational Commitment

The profile of the respondent-teachers, namely gender, age, educational attainment, monthly salary, and years in service, are observed variables investigated in the study together with latent variables such as occupational stress, organizational commitment, and work engagement.

METHOD

Research Design

Descriptive-correlational design was used in the study to describe the respondents' occupational stress, organizational commitment, and work engagement. Descriptive research design is normally used to describe and gain more information about the characteristics of the respondents while correlational research design helps determine the relationship or association between two or more variables. Furthermore, the study attempted to determine if significant associations exist between the three latent variables.

Respondents and Study Sites

Data regarding the different variables and their dimensions were obtained from the teachers teaching in the public senior high schools in Metro Manila offering Science, Technology, Engineering, and Mathematics (STEM) program. Data gathering was conducted in Metro Manila during the first term of academic year 2018 – 2019.There are a total of 159 public high schools in Metro Manila with senior high schools. Of these, 58 schools offer STEM program.

There are 53 teachers from the 7 schools in the first district (Manila); 147 teachers from the 23 schools in the second district (Mandaluyong, Marikina, Pasig, Quezon City, and San Juan); 92 teachers from the 5 schools in the third district (Caloocan, Malabon, Navotas, and Valenzuela); and 200 teachers from the 23 schools in the fourth district (Las Pinas, Makati, Muntinlupa, Paranaque, Pasay, Pateros, and Taguig). This resulted to a total of 492 teachers chosen purposively with the help of the school principal.

Sampling Technique

A complete list of public high schools in Metro Manila was obtained from the website of the Department of Education (DepEd). The schools were grouped according to districts or divisions and using stratified sampling technique, target schools were selected. All schools from each district or division offering STEM program were considered. Using GPower software and considering 95% confidence level, 80% statistical power and small effect size (e.s. = .02), at least 311 teachers are needed. The 492 teachers who participated exceeded the minimum sample size requirement and achieved 93% statistical power for correlation and regression analysis, and approximately 99% statistical power for comparing means.

Research Instruments

The survey questionnaire was composed of instruments adapted from published articles.

Variable	Dimensions	Number of items and reliability	Source
Occupational Stress	demand relationship control support role change	9 items, α = .925 7 items, α = .823 5 items, α = .883 5 items, α = .828 6 items, α = .885 6 items, α = .913	Mahmood, Coons, Guy, and Pelletier (2010), and YeboahandAnsong (2014)
Organizational Commitment	affective continuance internalization	5 items, α = .887 3 items, α = .882 4 items, α = .865	Meyer and Allen (2004), and DelobbeandVanden berghe (2000)
Work Engagement	vigor dedication absorption	6 items, α = .812 5 items, α = .927 6 items, α = .879	Utretch Work Engagement Scale (UWES) by Schaufeli et al. (2006)

The instruments were modified and were subjected to validation to make sure that they satisfy the internal consistency level. Pilot testing was conducted to a group of teachers manifesting the same characteristics as the actual respondents in order to determine its cultural adaptability. The required Cronbach's alpha value of .70 or higher was satisfied in all the instruments both in the overall and dimensional level.

Data Gathering Procedure

Survey method was used for data gathering. The endorsement of the DepEd NCR regional office and division offices were sought. The endorsement letters were attached to the letter for the school principal together with the survey instruments for the target participants. Questionnaires were retrieved upon the completion by the teacher respondents.

Ethical Considerations

Attached to the questionnaire was a letter of consent for the participants to inform them about the purpose of the study and giving them idea on who will benefit from the results. Respondents' participation was on a voluntary basis where they can answer the survey instruments free from intimidation and possible anxiety. Questions were constructed in such a way that no item is offending to the participants. The respondents were assured of the confidentiality of the data to be gathered and guaranteed them that it will be used only for the purpose of the research. For anonymity, participants were not required to write their names in the survey instruments. Codes were used only for verifying the accuracy of data encoding.

Data Analysis

The data was processed and analyzed using SPSS version 24 and Analysis of Moment Structure (AMOS) version 24. Mean, standard deviation, frequencies, and percentages were used to present the descriptive statistics of the study. Confirmatory Factor Analysis (CFA) was used to verify if all the indicators of the sub-dimensions are contributing significantly in measuring the construct. Mann-Whitney and Kruskal-Wallis test were used in testing for differences while Structural Equation Model (SEM) using AMOS was utilized to determine the relationships among the latent variables.

RESULTS

Profile of the Respondent-Teachers

The profile or personal characteristics of the participants include gender, age, educational attainment, salary, and years of teaching experience.

Table 1

Profile or background of the respondent teache

Age Cohort	Frequency	Percent
Generation Z	32	7.8
Generation Y	258	62.8
Generation X	98	23.8
Baby Boomers	23	5.6
Total	411	100.0
Gender	**Frequency**	**Percent**
Male	221	45.8
Female	262	54.2
Total	483	100.0
Educational Attainment	**Frequency**	**Percent**
College Graduate	93	19.5
With MA/MS units	213	44.7
MA/MS Graduate	105	22.0
With PhD units	55	11.5
PhD Graduate	11	2.3
Total	477	100.0

Salary Grade	Frequency	Percent
Salary Grade 11	119	25.8
Salary Grade 12	92	19.9
Salary Grade 13	151	32.7
Salary Grade 15	6	1.3
Salary Grade 16	4	.9
Salary Grade 17	2	.4
Salary Grade 18	28	6.1
Salary Grade 19	57	12.3
Salary Grade 20	3	.6
Total	462	100.0
Years of Service	**Frequency**	**Percent**
5 or less	315	74.6
6 to 10	59	14.0
11 to 15	21	5.0
16 to 20	13	3.1
21 or more	14	3.3
Total	422	100.0

Table 1 shows the profile of the participants in terms of age group, gender, salary, educational attainment, and years of teaching experience. Majority of the participants (n = 258, 62.8%) are generation Y teachers, commonly called as millennial who were born within the year 1977 – 1994 and 24 – 41 years of age. Very few teachers were baby boomers (n = 23, 5.6%) who were born on or before 1965 and currently 53 to 63 years of age. Approximately 45.8% are male (n = 221) and 54.2% are female (n = 262). Most of the teachers are receiving salary grades 11 to 13 (n = 362, 78.4%). When it comes to educational attainment, only 19.5% (n = 93) are not pursuing graduate studies. Majority of the teachers have masteral degree units (n = 213, 44.7%), or finished masteral degree (n = 105, 22%). Approximately 13.8% (n = 66) of the teachers have doctorate degree units or are doctorate degree holder. Around 74.6% (n = 315) are serving the current institution within 5 years while only 27.3% (n = 118) have total teaching experience of at most 5 years.

Confirmatory factor analysis

Table 2. Model Fit Measures of confirmatory factor analysis of occupational stress, organizational commitment, and work engagement using structural equation model

Measure	Threshold	Occupational Stress		Organizational Commitment		Work engagement	
		Estimate	Meaning	Estimate	Meaning	Estimate	Meaning
CMIN	--	2024.031	--	120.341	--	225.528	--
DF	--	613.000	--	48.000	--	73.000	--
CMIN/DF	Between 1 and 3	3.302	Acceptable	2.507	Excellent	3.089	Acceptable
CFI	>0.95	0.922	Acceptable	0.982	Excellent	0.971	Excellent
SRMR	<0.08	0.058	Excellent	0.051	Excellent	0.029	Excellent
RMSEA	<0.06	0.068	Acceptable	0.055	Excellent	0.065	Acceptable

CFA was used to determine the construct validity and dimensionality of occupational stress, organizational commitment, and work engagement.

Table 2 showed the acceptable values of the different model fit indices such as the ratio of chi-square and degree of freedom (CMIN/DF), comparative fit index (CFI), standardized root mean square residual (SRMR), and root-mean-squared error of approximation (RMSEA). For occupational stress, CFA revealed acceptable values of CMIN/DF, which is between 3 and 5, CFI that is greater than .90, and RMSEA that is less than .08 but with excellent value of less than .08. For the organizational commitment, CFA resulted to excellent values of the different model fit indices where CMIN/DF = 2.507, CFI = .982, SRMR = .051, and RMSEA = .055. For work engagement, CFA revealed also acceptable and excellent values of model fit indices where CMIN/DF = 3.089, CFI = .971, SRMR = .029, and RMSEA = .065. The values of the different model fit indices indicated good fitting model.

Table 3
Model validity measure of occupational stress (OS), organizational commitment (OC), and work engagement (WE)

	Construct	CR	AVE	Demand	Relationship	Control	Support	Role	Change
Occupational Stress (OS)	Demand	0.921	0.565	1					
	Relationship	0.876	0.503	0.577***	1				
	Control	0.926	0.715	0.527***	0.870***	1			
	Support	0.898	0.644	0.457***	0.908***	0.881***	1		
	Role	0.938	0.719	0.470***	0.801***	0.867***	0.862***	1	
	Change	0.927	0.681	0.588***	0.729***	0.761***	0.707***	0.778***	1
Organizational Commitment (JC)	Construct	CR	AVE	Affective	Continuance	Internalization			
	Affective	0.912	0.679	1					
	Continuance	0.777	0.540	0.371***	1				
	Internalization	0.897	0.691	0.723***	0.501***	1			
Work Engagement (WE)	Construct	CR	AVE	Vigor	Dedication	Absorption			
	Vigor	0.859	0.550	1					
	Dedication	0.936	0.747	0.902***	1				
	Absorption	0.848	0.533	0.803***	0.815***	1			

*** Significant at p < .001

Table 3 above showed the model validity measures of the 3 latent variables. Average variance extracted (AVE) measures the explained variance of the construct. For occupational stress, the values of AVE of the different constructs range from .503 to .719. For organizational commitment, AVE ranges from .540 to .679. And for work engagement, AVE ranges from .533 to .747. The AVEs of the different constructs satisfied the required value of at least .50, which indicated good discriminant validity (Fornell & Larcker, 1981). Composite Reliability (CR), which measures the internal consistency of the responses to the different items considering the actual loading of the items is greater than .70.

The CFA result of occupational stress confirmed the six factors with significant indicators and factor loadings ranging from .57 to .92. Best indicator of demand factor is the unrealistic time pressure, for relationship factor is the relationship with school administrators and supervisors, for control factor is the teachers' participation in making decisions, for support factor is the support of the colleagues, for role factor is their clear understanding about their goals and objectives in the organization, and for change factor is related to communication.

The CFA result of organizational commitment confirmed the three factors with significant indicators and factor loading ranging from .62 to .94. Some of the items such as items 6 (This organization doesn't have a great deal of personal meaning for me), 7 (I would be unhappy to spend the rest of my career with this organization), 8 (I feel that I have enough options to consider leaving this organization), 9 (One of the few consequences of leaving this organization would be the scarcity of available alternatives), and 12 (Right now, staying with my organization is a matter of necessity as much as desire) were removed because of low and insignificant standardized loading.

For affective commitment, best indicator is the teachers' feelings that they are like a part of the family at their organization. For continuance commitment, best indicator is their willingness to stay because leaving the organization would require personal sacrifice in their part due to inability of other organizations to give the same benefits they are currently receiving. For internalization commitment, it is best reflected in their reason why they prefer their organization to others is because of what it stands for and what its values are.

The CFA result of confirmatory factor analysis also confirmed the three factors with significant indicators and factor loading ranging from .60 to .89. However, items 1 (At my work, I feel like bursting with energy) and 13 (When I work, I forget everything else around me) were removed due also to low and insignificant standardized loading. CFA revealed that the best indicator of vigor is the teachers' excitement that when they get up in the morning, they feel like going to work. For dedication, best indicator is their feeling of enthusiasm in their job and the meaning and purpose they found in their work. While for absorption, best indicator is their feelings and experiences that they are immersed in their work.

Occupational Stress of teachers

Table 4 Descriptive statistics of the respondent-teachers' occupational stress

	Mean	SD	Skewness		Kurtosis		Interpretation
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Demand	5.04	1.16	-.55	.11	.16	.22	High
Change	4.28	1.38	-.26	.11	-.39	.22	Moderate
Role	3.73	1.39	.12	.11	-.58	.22	Moderate
Relationship	3.67	1.37	.15	.11	-.53	.22	Moderate
Control	3.88	1.37	.02	.11	-.44	.22	Moderate
Support	3.61	1.36	.22	.11	-.37	.22	Moderate
Occupational Stress	4.12	1.10	.06	.11	.07	.22	Moderate

Table 4 above showed the descriptive statistics of the level of teachers' overall occupational stress and its six dimensions. It shows that teachers are experiencing moderate level of occupational stress due to demand factors (M = 5.04, SD = 1.16) followed by change factor happening in the organization (M = 4.28, SD = 1.38). Teachers' level of stress in the area of relationship factor (M = 3.67, SD = 1.37) and support factor (M = 3.61, SD = 1.36) were the lowest. The table also shows that demand (skew = -.55) and change (skew = -.26) factors are skewed to the left while role (skew = .12), relationship (skew = .15), control (skew = .02), and support (skew = .22) are positively skewed. Among the six dimensions, only demand factor has positive kurtosis (.16), which indicates high level of stress. The STEM track teachers are experiencing moderate to high occupational stress in different aspects.

Table 5 Major factors contributing to teacher high level of occupational stress

Item	Statement	Mean
OS2	Too much work	5.45
OS7	Unrealistic time pressures	5.26
OS4	Conflicting demands	5.11
OS9	Too much pressure	5.07
OS3	Additional committee works	5.06

Mean is computed and used to determine the indicators with high contributions to the overall occupational stress level of the respondent-teachers. Table 5 shows that all indicators with the highest means are from the demand factor. This is the reason why the demand factor is the major contributing factor to the occupational stress of the respondent-teachers. Teachers' too much work (M = 5.45), unrealistic time pressures (5.26) and too much pressure (5.07), conflicting demands (5.11), and additional committee works (M = 5.06) contributed to respondent-teacher moderate to high level of occupational stress.

Table 6
Test of difference in the teachers' level of occupational stress according to their profile

Occupational Stress	Mann-Whithney (U) Test		Kruskal-Walls (H) Test							
	Gender		Age Generation		Salary		Education		Years of Service	
	U (1)	p-value	H (3)	p-value	H (2)	p-value	H (4)	p-value	H (4)	p-value
Demand	29211	.559	3.464	.325	.207	.902	3.223	.521	1.700	.791
Change	27123	.056	12.465	.006**	.570	.752	1.346	.854	18.349	.001**
Role	26616	.025*	7.589	.055	1.274	.529	3.173	.529	14.242	.007**
Relationship	26849	.037*	5.898	.117	2.817	.245	5.758	.218	13.736	.008**
Control	26096	.010*	9.785	.020*	3.916	.141	1.941	.747	10.665	.031*
Support	28071	.190	8.004	.046*	3.086	.214	7.168	.127	7.774	.100
Overall	27355	.078	11.403	.010*	1.156	.561	2.593	.628	12.618	.013*

** Significant at p < .01, * Significant at p < .05

Table 6 showed the test of difference between the male and female occupational stress levels using Mann-Whitney test. Significant difference was found in the male and female stress levels for role ($U(1) = 26{,}616$, $p < .05$), relationship ($U(1) = 26{,}849$, $p < .05$), and control ($U(1) = 26{,}096$, $p < .05$) factors. Results showed that male teachers are experiencing higher level of stress in these aspects. However, no significant difference was found in their overall occupational stress ($U(1) = 27{,}355$, $p > .05$). Both male and female teachers are experiencing moderate to high level of occupational stress with the demand factor giving the highest contribution.

Test of significant difference in the occupational stress of the teachers according to their age generation, salary, education and years of service was conducted using the Kruskal-Wallis (H) test. Results revealed that there was significant difference in their overall occupational stress ($H(3) = 11.40$, $p < .05$). Specifically, there were significant differences in their stress levels in the change factor ($H(3) = 12.47$, $p < .05$), control factor ($H(3) = 9.79$, $p < .05$), and support factor ($H(3) = 8.00$, $p < .05$). Occupational stress' mean ranking of generation Y teachers ($M_{rank} = 218.87$) is significantly higher than the mean ranking of baby boomer teachers ($M_{rank} = 146.39$). It also showed that generation Y teachers are experiencing the highest level of stress compared with the other groups. Their stress levels in the change, control and support factors are significantly higher than the baby boomer teachers. All the groups are experiencing equally high level of stress considering the demand, role, and relationship factors.

No significant differences was found in the level of occupational stress of teachers according to their salary grade ($H(2) = 1.16$, $p > .05$). It showed that the teachers' level of occupational stress does not significantly change according to salary grade. Regardless of salary grade, teachers are experiencing the same level of occupational stress. None of the occupational stress dimensions is following a consistent increasing trend.

There was no significant difference in the overall occupational stress level of the teachers according to educational attainment ($H(4) = 2.59$, $p > .05$). This indicated also that teachers' level of occupational stress does not change significantly according to their educational attainment.

There was significant difference in the overall occupational stress level of the teachers according to years of service in the current institution ($H(4) = 12.62$, $p < .05$). Significant difference was also observed in the different dimensions such as change ($H(4) = 18.35$, $p < .05$), role ($H(4) = 14.24$, $p < .05$), relationship ($H(4) = 13.74$, $p < .05$), and control ($H(4) = 10.67$, $p < .05$) factors. Teachers who served the current institution for 6 to 10 years experienced the highest level of stress ($M_{rank} = 241.93$). However, teachers who served the institution for 11 to 15 years experienced the lowest level of stress ($M_{rank} = 140.48$). It also shows that each group is experiencing highest level of stress due to the demand factor.

These results showed that there is enough evidence to say that hypothesis 1 (There is no significant difference in the occupational stress level of the teachers according to their profile) should be rejected. Teachers' occupational stress is significantly different when they are grouped according to age and years of service.

Organizational commitment

The level of organizational commitment and test of its difference according to the profile of the respondent-teachers are presented in this section.

Table 7 ***Descriptive statistics of the respondent-teachers' organizational commitment***

	Mean	SD	Skewness		Kurtosis		Interpretation
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Affective	5.27	1.02	-.52	.11	.59	.22	High
Continuance	4.62	1.31	-.47	.11	.06	.22	High
Internalization	4.99	1.14	-.43	.11	.07	.22	High
Organizational Commitment	5.01	.92	-.46	.11	.48	.22	High

Table 7 showed the descriptive statistics of the teachers' level of organizational commitment. Results revealed that among the three dimensions of organizational commitment, highest level was observed in the teachers' affective commitment ($M = 5.27$, $SD = 1.02$), followed by internalization commitment ($M = 4.99$, $SD = 1.14$), and lowest is continuance commitment ($M = 4.62$, $SD = 1.31$). All dimensions are negatively skewed with values between -1 and 0 while kurtosis is positive with values between 0 and 1. This indicates that majority of the teachers have high level of organizational commitment.

Table 8 ***Major factors contributing to teacher high level of organizational commitment***

Item	Indicators	Mean
OC1	I feel a strong sense of belonging to my organization (school).	5.59
OC3	I feel like 'part of the family' at my organization.	5.44
OC2	I feel 'emotionally attached' to this organization.	5.23
OC4	I enjoy discussing my organization with people outside it.	5.16
OC15	The reason I prefer this organization to others is because of what it stands for, its values.	5.11

Table 8 shows the indicators contributing to the respondent-teachers' high level of organizational commitment. Strong sense of belongingness (M = 5.59) and family spirit in the organization (M = 5.44) are very important for the employees for them to be more committed to the organization. Teachers are emotionally attached to the school organization (M = 5.23) due to its values and what it stands for (M = 5.11). These feelings made them proud to talk about their organization even to people outside the school community (M = 5.16)

Table 9
Test of difference in the organization commitment levels according to the profile of the respondent-teachers

Organizational Commitment	Mann-Whithney (U) Test		Kruskal-Walls (H) Test							
	Gender		Age Generation		Salary		Education		Years of Service	
	U (1)	p-value	H (3)	p-value	H (2)	p-value	H (4)	p-value	H (4)	p-value
Affective	29091.0	.508	2.435	.487	8.639	.013*	5.737	.220	17.991	.001**
Continuance	26522.5	.021*	4.512	.211	.231	.891	1.843	.765	1.246	.871
Internalization	28999.5	.471	2.117	.549	3.616	.164	5.075	.280	12.333	.015*
Overall	27764.5	.133	2.466	.481	5.090	.078	4.442	.350	9.937	.042*

** Significant at p < .01, * Significant at p < .05

Table 9 showed the test of difference in the teachers' level of organizational commitment according to their profile. Mann-Whithney (U) test results revealed that male and female teachers 'level of organizational commitment is not significantly different (U(1) = 27,764.50, p > .05), although male teachers have significantly higher continuance commitment compared to female teachers (U(1) = 26,522.50, p < .05). No significant difference was found in their affective commitment (U(1) = 29,091, p > .05) and internalization commitment (U(1) = 28,999.50, p > .05). Both male and female have high affective commitment, followed by internalization commitment, and the lowest is continuance commitment.

Test of significant difference in the organizational commitment of the teachers according to their age generation, salary, education and years of service was conducted using the Kruskal-Wallis (H) test also. According to age generation, no significant difference was found on the teachers' overall organizational commitment (H(3) = 2.47, p > .05). Considering its dimensions, no significant difference was also found in the teachers' level of affective (H(3) = 2.44, p > .05), continuance (H(3) = 4.51, p > .05) and internalization (H(3) = 2.12, p > .05) commitments. There is an increasing trend on affective and internalization commitments but a decreasing trend for the continuance commitment.

According to salary grades, no significant difference was found in the teachers' level of organizational commitment (H(2) = 5.09, p > .05), although significant difference was obtained in their affective commitment (H(2) = 8.64, p < .05). Continuance commitment is low for those teachers who are receiving salary grades of 11 to 13 (teacher level). However, teachers have the highest level of organizational commitment considering affective commitment. There is no pattern of increasing level of organizational commitment according to salary grades.

Considering educational attainment, results revealed that there were no significant differences in the teachers' level of affective (H(4) = 5.74, p > .05), continuance (H(4) = 1.84, p > .05), internalization (H(4, 66) = 5.08, p > .05), and overall organizational commitments (H(4) = 4.44, p > .05).

Only continuance commitment followed consistent increasing trend according to educational attainment of teachers; however, the increase is not significant.

According to years of service, there were significant differences in the teachers' level of affective ($H(4) = 17.99$, $p < .05$), internalization ($H(4) = 12.33$, $p < .05$), and overall organizational commitments ($H(4) = 9.94$, $p < .05$). However, no significant difference was found in their continuance commitment ($H(4) = 1.25$, $p > .05$). Teachers who are serving the current institution for 11 to 15 years have the highest level of affective commitment ($M_{rank} = 310.43$) while teachers who are serving the institution for 21 years or more have the highest internalization commitment ($M_{rank} = 279.04$). An increasing level of organizational commitment according to years of teaching at the current institution was only found in internalization aspect.

The results proved that there is enough evidence to say that hypothesis 2 (There is no significant difference in the organizational commitment of teachers according to profile) should be rejected. Specifically, there is significant difference in the teachers' level of organizational commitment when they are grouped according to their years of service.

Work Engagement

The teachers' level of work engagement at test of its difference according to profile are presented in this section.

Table 10 ***Descriptive statistics of the respondent-teachers work engagement***

	Mean	SD	Skewness		Kurtosis		Interpretation
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Dedication	5.16	.83	-1.23	.11	1.61	.22	High
Vigor	4.84	.80	-1.08	.11	2.30	.22	High
Absorption	4.81	.85	-.89	.11	1.41	.22	High
Work Engagement	4.94	.75	-1.13	.11	1.74	.22	High

Table 10 indicated that among the three dimensions of work engagement, highest level was observed in the teachers' dedication ($M = 5.16$, $SD = .83$) followed by vigor ($M = 4.84$, $SD = .80$). All dimensions are negatively skewed with values between -1 and 0 while kurtosis is positive with values between 0 and 1. This indicates that majority of the teachers have high level of work engagement.

Table 11 ***Major factors contributing to teachers' high level of work engagement***

Item	Indicators	Mean
WE10	I am proud of the work that I do.	5.24
WE11	My job is challenging enough.	5.19
WE7	I find the work that I do meaningful and purposeful.	5.14
WE9	My job inspires me.	5.14
WE8	I am enthusiastic about my job.	5.11

Table 11 shows the indicators contributing to the respondent-teachers high level of work engagement. Teachers are proud (M = 5.24) and find meaning and purpose in their work (M = 5.14). They feel inspired (M = 5.14), enthusiastic (M = 5.11), and challenged by the teaching job (M = 5.19). These indicators were considered as the top contributing factors to respondent-teachers high level of work engagement.

Table 12
Test of difference in the work engagement levels according to the profile of the respondent-teachers

Work Engagement	Mann-Whithney (U) Test		Kruskal-Walls (H) Test							
	Gender		Age Generation		Salary		Education		Years of Service	
	U (1)	p-value	H (3)	p-value	H (2)	p-value	H (4)	p-value	H (4)	p-value
Dedication	27422.5	.081	5.504	.138	1.863	.394	1.669	.796	9.714	.272
Vigor	28928.5	.442	7.545	.056	2.232	.328	3.593	.464	8.435	.046*
Absorption	27917.5	.158	8.230	.041*	6.213	.045*	1.700	.791	8.983	.077
Overall	27639.5	.113	8.267	.041*	2.308	.315	1.455	.835	5.153	.062

** Significant at $p < .01$, * Significant at $p < .05$

Table 12 showed the test of differences in the teachers' level of work engagement was conducted again using Mann-Whitney U test when they are grouped according to gender and Kruskal-Wallis if according to age, salary, education, and years of service. Results revealed that there was no significant difference between the male and female level of dedication ($U(1) = 27,422.50$, $p > .05$), vigor ($U(1) = 28,928.50$, $p > .05$), absorption ($U(1) = 27,917.50$, $p > .05$) , and overall work engagement ($U(1) = 27,639.50$, $p > .05$).

According to age generation, the results of Kruskal-Wallis test revealed that there was significant difference in the teachers' overall level of work engagement ($H(3) = 8.27$, $p < .05$). Baby boomer teachers have the highest level of work engagement (M_{rank}= 245.96) while generation Z teachers have the lowest level (M_{rank}= 162.89). Specifically, significant difference was found only in their level of absorption ($H (3) = 8.23$, $p < .05$), but not in dedication ($H(3) = 5.50$, $p > .05$) and vigor ($H(3) = 7.55$, $p > .05$). An increasing trend in the teachers' level of dedication, vigor, and absorption were found in relation to age generation.

Results also revealed that there were no significant difference in the teachers' level of dedication ($H(2) = 1.86$, $p > .05$), vigor ($H(2) = 2.23$, $p > .05$), and overall work engagement ($H(2) = 2.31$, p >. 05) according to salary grade. However, there was significance difference in the teachers' level of absorption ($H(2) = 6.21$, $p < .05$). Teachers who are receiving salary grades of 18-20 or the master teachers have the highest level of absorption (M_{rank} = 273.68) while teachers who are receiving salary grades of 11 to 13 have the lowest level (M_{rank} = 236.99).

According to their educational attainment, the results of Kruskal-Wallis test revealed that there were no significant differences in the teachers' level of dedication ($H(4) = 1.67$, $p > .05$), vigor ($H(4) = 3.59$, $p > .05$), absorption ($H(4) = 1.70$, $p > .05$), and overall work engagement ($H(4) = 1.46$, $p > .05$).

According to years of service,the results of Kruskal-Wallis test revealed that there were no significant differences in the teachers' level of dedication ($H(4) = 9.71$, $p > .05$), absorption ($H(4) = 8.98$, $p > .05$), and overall work engagement ($H (4) = 5.15$, p > 05). However, there was significant difference in the teachers' level of vigor ($H (4) = 8.435$, p < 05). Teachers who are serving the institution for 11 to 15 years have the highest level of vigor (M_{rank}= 287.95).

The results showed that there is enough evidence to say that hypothesis 3 (There is no significant difference in the work engagement level of the respondent-teachers according to profile) should be rejected. Specifically, there was significant difference in the teachers' level of work engagement when they are grouped according to age generation.

Structural equation model

This section contains the correlation results of occupational stress, organizational commitment, and work engagement using structural equation model.

Table 13 ***Model fit indices for structural equation model***

Measure	Estimate	Threshold	Interpretation
CMIN	73.173	--	--
DF	38.000	--	--
CMIN/DF	1.926	Between 1 and 3	Excellent
CFI	0.995	>0.95	Excellent
SRMR	0.045	<0.08	Excellent
RMSEA	0.043	<0.06	Excellent
PClose	0.752	>0.05	Excellent

Table 13 showed the different model fit indices that were used to assess the structural equation model. The ratio of chi-square to the degree of freedom (CMIN/DF = 1.926), comparative fit index (CFI = .995), standardized root mean square residual (SRMR = .045), and root mean square error approximation (RMSEA = .043) obtained excellent values and indicated good model fit of data.

Table 14

Regression estimates of the different dimensions of occupational stress, organizational commitment, and work engagement

Variable	Dimensions	Unstandardized Estimate	S.E.	Standardized Estimate	P-value
Occupational Stress	Demand	.603	.040	.620	***
	Role	.856	.034	.881	***
	Change	.729	.076	.755	***
	Relationship	.934	.031	.984	***
	Control	.916	.032	.947	***
	Support	.945	.032	.975	***
Organizational Commitment	Affective	.875	.042	.902	***
	Continuance	.416	.043	.462	***
	Internalization	.820	.042	.843	***
Work Engagement	Vigor	.935	.032	.975	***
	Dedication	.951	.032	.970	***
	Absorption	.850	.034	.886	***

***Significant at $p < .001$

Table 14 indicated that six dimensions of occupational stress, three dimensions of organizational commitment, and three dimensions of work engagement are all important dimensions with significant standardized estimates ranging from .462 to .984 ($p < .001$). Occupational stress explained the highest variation in relationship (96.83%) and support (95.06%) factors. Organization commitment greatly explained the variation in affective commitment (81.36%), while work engagement greatly explained the variation in teachers' level of vigor (95.06%).

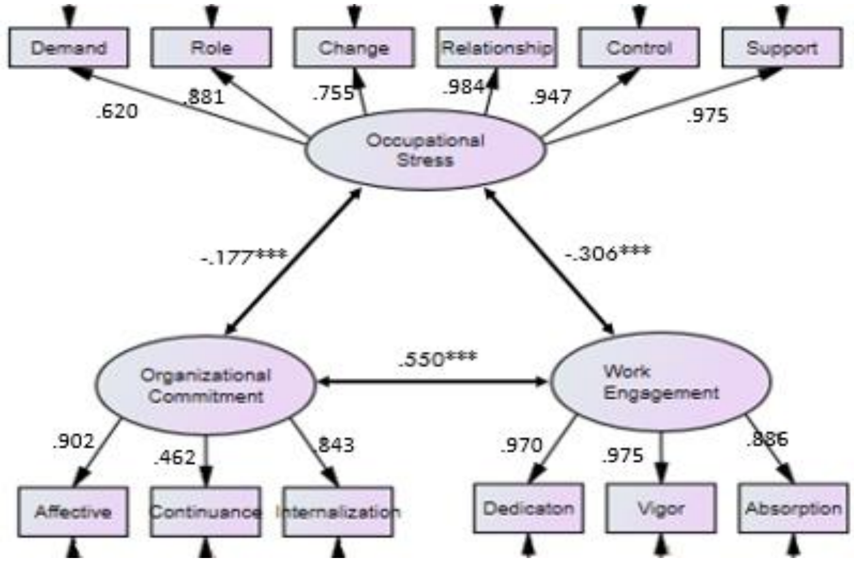

Figure 2. **Structural equation model of the relationship between occupational stress, organizational commitment, and work engagement using the maximum likelihood estimates.**

The emerging structural equation model shown in figure 5 revealed that significant correlation existed between the three latent variables. Occupation stress is significantly correlated to organizational commitment (β = -.177, p <. 001) and work engagement (β = -.306, p <. 001). However, positive correlation existed between organizational commitment and work engagement (β = .550, p <. 001). It is also shown in the results that overall occupational stress greatly explained the relationship and support factors. However, the overall organizational commitment can be best seen in the teachers' affective commitment while overall work engagement in teachers' vigor and dedication.

The results of SEM proved that there are enough evidences that hypothesis 4 (There is no significant relationship between occupational stress and organizational commitment), hypothesis 5 (There is no significant relationship between occupational stress and work engagement), and hypothesis 6 (There is no significant relationship between organizational commitment and work engagement) should be rejected.

The results of data analysis revealed that there are personal factors significantly related to occupational stress, organizational commitment, and work engagement and that these three latent variables also have significant relationships.

DISCUSSION

Occupational Stress

The data gathered in this study revealed that teachers are experiencing moderate to high level of occupational stress. Too much work, unrealistic time pressures, additional committee works, and conflicting work demands contributed to the occupational stress of the teachers. The result is consistent to the findings of Chaplain (2008) that secondary school teachers considered teaching very stressful while according to Sun et al. (2011), even university teachers are also experiencing severe occupational stress. Teachers are experiencing so much pressure due to too much workload or numerous teaching responsibilities that aside from their regular teaching duties, such as lesson preparation and correcting test papers, they need to communicate with parents, perform some administrative duties, and comply with research output (Sun et al., 2011). In addition to their excessive workload, they don't have opportunity to communicate with their school administrators and colleagues, which is the reason why they cannot get adequate support to manage their stress (Yang et al., 2009). Too many changes at work that are not properly communicated also contributed to occupational stress of teachers. According to Yang et al. (2009), the high level of occupational stress is due also to changes in education and in utilizing modern technologies for educational purposes that require time and effort in absorbing the latest knowledge to keep abreast with the latest trends in education.

Occupational stress of teachers does not differ significantly according to gender. However, when considering the dimensions of occupational stress, male teachers experienced significantly higher level of stress reflected in the role, relationship, and control factors. Male teachers are experiencing higher level of stress due to relationship problems in the workplace. They are more affected by damaged relationships and arguments in the workplace compared to female. Understanding the teachers' roles and role conflicts in the workplace also contributed to higher stress level of male teachers. Giving more authority in their job and opportunities to participate and implement decisions can contribute to reduce the stress of male teachers. These findings do no support the study of Yang et al. (2009) and Antoniou et al. (2013), which revealed that female teachers have higher occupational stress than male teachers. According to them, female teachers in China usually accept more responsibility than males. To reduce the gender gap in occupational stress, equal opportunities and adequate support must be provided in order for them to manage occupational stress properly.

Change factors, such as changes at work and speed of change, contributed to the higher occupational stress level of generation Z and generation Y teachers. This result is somewhat parallel to the findings of İpek et al. (2018) who revealed that teachers from the 22 – 30 age group are experiencing the highest level of occupational stress while teachers from 41 – 50 age group are the ones experiencing the lowest level. This also confirms the findings of Sun et al. (2011) that occupational stress decreased for aging teachers. Therefore, the baby boomer teachers who are experiencing the lowest level of occupational stress could help the other teachers on how to manage the stress. Teachers, whether they are receiving high or low monthly salary, are experiencing the same level of occupational stress. This relationship of salary grade to the overall occupational stress is not consistent to the findings of Sun et al. (2011) who revealed that monthly salary is associated with occupational stress. They further explained that teachers who are getting higher salaries are confronted with a lot of pressure due to performance-based management measures.

Despite an increasing trend of occupational stress according to educational attainment, the differences failed to reach at significant level. This is contrary to the finding of Lunau et al. (2015) that teachers with lower education are experiencing higher level of stress. Teachers who have longer teaching experiences have the lower level of occupational stress due to change, role, relationship, and control factors. This study supports the findings of Aftab and Khatoon (2012) who revealed that highest level of occupational stress was experienced by teachers who are teaching for 6 to 10 years. The current study revealed that teachers teaching for 11 to 15 years have the lowest level of occupational stress while Aftab and Khatoon (2012) found it to teachers teaching from 0 to 5 years. Therefore, an assessment of additional works should be made in order to have proper delegation of tasks to teachers from different groups where complicated tasks can be assigned to teachers with lower level of occupational stress.

Organizational Commitment

The study revealed that teachers have high level of organizational commitment. This is higher than the university teachers who, according to Farooq and Zia (2013), have medium commitment level. Assessing organizational commitment is important to determine the right people who can contribute in achieving the goals of the organization (Nagar, 2012). The result of this study that there is no significant difference in the organizational commitment of male and female teachers is consistent to the findings of Anari (2012). Contrary to this result, the studies of Farooq and Zia (2013) and Hulpia, Devos, and Van Keer (2009) revealed that male teachers are more committed to their organizations as compared to female teachers. The current study also supported Albdour and Altarawneh (2014) who revealed that there is no significant difference in the organizational commitment of employees according to their educational level. This is also an indication that educational attainment is not significantly related to organizational commitment. In contrary, Wong and Tong (2014) found out that educational attainment is significantly related to continuance commitment.

The organizational commitment of the teachers does not differ significantly according to their salary grades. This result is not consistent to the claim of Wong and Tong (2014) that monthly salary is significantly related on passive continuance commitment. The current study supported again Albdour and Altarawneh (2014) who claimed that there is no significant difference in the organizational commitment of employees according to age generation. However, their claim that there was no significant difference in the organizational commitment of employee according to their tenure is not supported. Significant difference in the overall organizational commitment is observed between teachers with 11 to 15 years of teaching experience and teachers with 5 years or less teaching experience. Additionally, significant difference in the affective commitment wasobserved between teachers with 11 to 15 years of teaching experience and teachers with 6 to 10 and 5 years or less teaching experience. For internalization commitment, significant difference was observed between teachers with 21 years or more teaching experience and teachers with 5 years or less teaching experience.

Work Engagement

STEM track teachers manifested high level of work engagement. The insignificant difference between the male and female levels of work engagement is not consistent to the findings of Mauno et al. (2007) who revealed that women have higher level of absorption and vigor compared to men. This is contrary also to the findings of Agarwal et al. (2012) who revealed that male has higher level of work engagement compared to female. The current study also revealed that there is significant difference in the work engagement level of the respondent-teachers according to age generation. Baby boomer teachers have significantly higher level of work engagement compared to generation Z teachers. This is an indication that age is significantly and positively related to work engagement, which support the same claims of many researchers (Agarwal et al., 2012; Bezuidenhout & Cilliers, 2011; Shimazu & Schaufeli, 2009; and Schaufeli et al., 2006).

There is no significant difference in the work engagement level of the respondent-teachers according to their educational attainment. Although teachers with MA degrees have higher level of work engagement, which is also true for dedication and absorption, the differences were not significant when compared to the other groups. The study failed to support other related studies who revealed that significant relationship exists between educational attainment and work engagement (Agarwal et al., 2012; Lawrence, 201; Karatepe & Olugbade, 2009). The current study also found out that there was no significant difference in the work engagement level of the teachers according to their salary. This also indicates that salary is not significantly related to work engagement and thus it cannot explain the work engagement level of the teachers. However, when considering the dimensions, significant difference was found between the absorption level of master teacher and head teacher.

Considering the teachers' years of service, highest level of work engagement was obtained by teachers who are teaching 11 to 15 years and the lowest by the teachers teaching for 5 years or less. Specifically, group of teachers teaching for 21 years or more has the highest level of dedication and absorption, while group of teachers teaching for 11 to 15 years have the highest level of vigor. In general, however, there was no significant difference in the work engagement level of the teachers according to years of service. This indication of no relationship between years of service and work engagement contradicts the findings of Agarwal et al. (2012).

Occupational stress, organizational commitment, and work engagement

SEM results revealed that significant relationships existed between occupational stress, organizational commitment, and work engagement. The negative relationship between occupational stress and organizational commitment supported Bhatti et al. (2016) who emphasized that occupational stress is one of the factors that contribute to employees' low organizational commitment.

The study also supported the findings of Alipour and Monfared (2015) who claimed that occupational stress and organizational commitment are inversely related. They further emphasized that occupational stress is negatively related to affective and continuance commitments. Additionally, the findings of Harun et al. (2014), Khatibi et al. (2009), and Tiwari and Mishra (2008) are also supported by the current study.

Among the three dimensions of organizational commitment, affective commitment is the one highly correlated with occupational stress while continuance commitment is not correlated. This is consistent to the findings of Khatibi et al. (2009).

Considering the relationships between the dimensions, affective commitment is significantly and negatively correlated with the six dimensions of occupational stress while internalization commitment is significantly and negatively correlated to all dimensions of occupational stress except to change factor. The overall organizational commitment level of the teachers is significantly correlated to all the six dimensions.

However, the current study failed to support Jamal (2011) who claimed that overall occupational stress and its dimensions, such as work overload, work ambiguity, work conflict, and resources, are not significantly related to organizational commitment. Tang (2008) and Ziauddin et al. (2010) who revealed that occupational stress and organizational commitment are positively related were not supported also. According to Bytyqi et al. (2010), employees with high organizational commitment do not always have low work stress level. Teachers who are more committed to their organization have the tendency to exert more effort, time, and resources, which could contribute to their stress level. When the support of the supervisor or administrator is not enough, the organizational commitment of the employees will not improve (Chairuddin et al., 2015).

The significant negative relationship between occupational stress and work engagement of public STEM track teachers supported the findings of Padula et al. (2012) and Derbis (2012). According to Iqbal et al. (2012), stress is one of the factors that negatively affect the work engagement of the employees in the workplace. Considering the relationship between work engagement and occupational stress, all the six dimensions of occupational stress are significantly and negatively correlated with dedication, vigor, absorption, and overall work engagement. Additionally, the findings of Ramos et al. (2014) about the negative relationship of role conflict and role ambiguity to work engagement were supported. Ways on how to minimize occupational stress should be prioritized in order to encourage higher work engagement of the employees (Iqbal et al., 2012). Giving more autonomy can improve the work engagement (Mustosmäki et al., 2013). For academicians, autonomy and social support are important to encourage higher engagement (Alzyoud et al., 2015). Support factor significantly influenced work engagement (Chairuddin et al., 2015). According to Rothmann (2008), employees who experience high stress due to lack of support have lower level of vigor and dedication. This means that supervisors and administrators who are in direct contact with the employees play an important role in helping the organization to encourage the employees attain their highest level of work engagement.

The positive relationship between organizational commitment and work engagement of public STEM track teachers supported the findings of Chairuddin et al. (2015), Beukes and Botha (2013), and Agyemang and Ofei (2013). This indicates that employees with higher level of work engagement also have higher level of organizational commitment. The current study also showed that significant positive correlation exists between the dimensions of organizational commitment and work engagement. The dimensions of work engagement, namely dedication, vigor, and absorption, are significantly and positively correlated to affective commitment, continuance commitment, internalization commitment, and overall organizational commitment. According to Field and Buitendach (2011), significant relationship exists between affective commitment and work engagement, and work engagement can be used as predictor of affective dimension of organizational commitment. Additionally, Eghlidi and Karimi (2016) pointed out that among the three dimensions of work engagement, work dedication is the best predictor of employees' commitment to the organization. In the current study, vigor could be the best predictor of organizational commitment and affective commitment to work engagement due to their high correlations.

CONCLUSION

The current study revealed some significant differences regarding the teachers' level of occupational stress, organizational commitment, and work engagement. Generation Y teachers and teachers with 6 to 10 years of experiences have significantly higher level of occupational stress. Teachers with at most 5 years of service have the lowest level of organizational commitment while generation Z teachers have the lowest level of work engagement. Teachers are experiencing high level of stress due to so many factors such as too much work, time pressure, conflicting work demands, involvement in different committee works, and insufficient space for different activities.

To address the needs of the senior high school teachers, a welfare program is proposed. The program is an intervention program to improve the welfare of the teachers especially those who are experiencing higher level of occupational stress and those with the lowest level of organizational commitment and work engagement. Aside from helping the teachers manage their occupational stress, the program should give them the opportunities to experience sense of belongingness and high level of family spirit, which can contribute to further improve their organizational commitment. When teachers feel proud, inspired, enthusiastic, and challenged, and found meaning and purpose in their teaching job, a higher level of work engagement can be attained.

Since significant relationships were also found among the teachers' level of occupational stress, organizational commitment, and work engagement, this implied that those teachers with higher occupational stress are those with lower organizational commitment and work engagement, and teachers with lower level of commitment are also those with lower level of work engagement. Policy makers and school administrators should consider personal and school related factors when creating policies, programs, or activities that will help improve their welfare. A customized welfare program at the individual school level should be created in order to address the needs of the teachers.

Furthermore, similar studies can be conducted considering bigger scope, different sectors, and other school-and non-school-related factors affecting teachers' work performance. Additional researches related to DepEd research agenda are also suggested. Aside from the contribution to the body of knowledge, the present study and the suggested future researches are expected to contribute not only in improving the welfare of the teachers but also to the improvement of quality of Philippine education in general.

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MOTIVATIONAL DIMENSIONS OF TRAVEL BEHAVIOR OF TNVS COMMUTERS: BASIS OF A CIRCULAR FLOW OF SUSTAINABLE (TNVS) OPERATION

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ABSTRACT

The study examined the influence of motivational dimensions of travel behavior on the satisfaction and patronage on TNVS use. Specifically, it evaluates the significant difference in the level of agreement of the non-student and student riders of TNVS on their motivational dimensions of travel behavior as well as their level of satisfaction on the TNVS quality. Data from 428 non-student and 449 student users of TNC were collected and processed using SPSS version 20 and WARP PLS version 5.0. The structural equation analysis reveals the following: (i) economic benefits positively affect satisfaction of the TNVS riders, (ii) perceived usefulness has a positive effect on the satisfaction of TNVS riders, (iii) trusts positively affect satisfaction of the riders, (iv) TNVS quality positively affects satisfaction of the TNVS rider, (v) satisfaction positively affects the patronage of the TNVS riders, and (vi) environmental impact has a negative effect on the satisfaction of the TNVS riders. The study has proven the influence of the four motivational dimensions on the satisfaction of the TNVS users, which would lead to patronage (increased utilization) of TNCs services.

Keywords: motivational dimension, travel behavior, transport network vehicle service (TNVS), transport network companies (TNCs), structural equation model (SEM)

INTRODUCTION

An efficient transportation network system is a prerequisite for an emerging economy. Developing metropolitan regions face challenges of meeting daily transportation demands of travelers within the region. For a metropolitan region to be considered developed, it needs to prioritize transportation because of the mobility of people going to work, schools, entertainment, medical needs, as well as for products and services for the supply chain (Kumari and Geethanjali, 2010).

Metro Manila, having 22.7 million occupants (PSA, 2018), is considered highly urbanized and the most populous region in the Philippines. This vast number of people living in this area needs better transportation system to meet the daily demand of commuters. At present, there are several modes of transportation, such as bus, jeepneys, FX, tricycle, and taxi, in the metropolitan areas. Though there are continuous efforts to work on innovations in mobility and transportation to ease commuters' problems, the riding public,due to their bad experiences,has a negative perception on using the conventional taxis because of poor management leading to poorly maintained units and often impolite drivers (Philstar,2018).

The advent of mobile commerce created distinct effect on commuters' travel behavior (Bayen and Work, 2008; Shao, 2000). Presently, smartphones access online data to better navigate destinations, such as going to work or school, finding the bank branch or the closest bus stop, or going to mall, while using various applications. They can also monitor traffic flow to obtain traffic situation, or an approximation of destination arrival time. Transportation Network Companies (TNCs) such as Grab and Uber define a new mode or rideshare by using smartphone applications to link commuters with drivers. These TNCs promised to provide premium services to the commuters (Cu, 2018). However, on March 26, 2018, Uber was sold to Grab that made it possible for Grab to monopolize the TNVS operations in the Philippines. Hence, TNVS commuters started to complain about the quality of service of Grab (Business Mirror, 2018). The commuters complained about the cases of price-gouging drivers, unavailability of vehicles often during rush hour, and safety issues (both for the riding public and drivers), which have steadily been increasing despite attempts to control them by the agencies tasked to regulate transportation (manilastandard.net, 2018).

The question on how the TNVS can have sustainable operation in the transportation sector is a big challenge. Hence, this study was conducted to shed light on how this new transport mode would likely influence Metro Manila commuters to increase the utilization (patronage) and eventually become sustainable.The purpose of this study was to explicate the motivational dimensions of travel behavior of commuters usingTNVS, and to determine the influence of these motivationalfactors on the satisfaction of TNVS users that would lead to patronage (increasein the utilization) of TNVS/ridesharing services.

This study will be significant to the TNVS operators and drivers as this will provide insight on how commuters' motivational dimensions affect their level of satisfaction so that they will continue patronizing TNVS. It will also benefit the Transport Network Companies (TNCs) in general as they can also refer to the result so that proper marketing strategies may be applied to capture bigger market share. It will benefit the commuterssince the result will be used to craft policy that would provide better TNVS quality. LandTransportation Franchising andRegulatory Board (LTFRB) can also gain from the result of the study,which may provide guidelinesincrafting policies, rules and regulations for those who would like to be accredited as Transport Network Companies (TNCs), operators and drivers of the TNVS.Other transport providers would also gain insight on how the level of satisfaction of commuters would lead to patronage of their service. As a researcher and operator of Grab, her gained insights would be used to create a tactic for the daily operation of her business that would guarantee satisfaction ofcommuters and driver.For future researchers, the result of the study can be a baseline to engage in similar researchers either as a continuum or a way by which the other sectors of the public transportation system can be explored with an aim of providing good service to the riding public.

Literature Review

Theoretical Framework

The study is anchored on three theories. The Utility Maximizing Theory (McFadden, 1974; Van Acker and Witlox, 2016) focuses on individual's choice-behavior and states that individuals will choose the alternative that offers the largest utility. Usually, utility is defined as a linear function of the choice alternative's attributes and this function generally includes individual socio-economic characteristics as well. Hence, individual preferences are expressed by this utility function. Although individual perceptions and attitudes are recognized, utility-maximizing studies generally do not incorporate these individual perceptions and attitude. In practice, the theory is used for forecasting rather than understanding the mechanism of travel behavior, and it is argued that perceptions and attitude are difficult to forecast. The utility-maximizing theory recognizes relationships between short-term and long-term decisions. Daily travel behavior (e.g., modal choice, destination choice) can depend on long-term decisions such as car ownership, residential and job location. Thus, the theory offers a conceptual model in which relationships exist between several choices.

The activity-based approach (Goodwin and Hensher, 1978) can be considered as an extension of the utility-maximizing theory. Travel behavior is considered as derived from the activities in which the individual wants to participate. Because living, working, shopping and recreating are spatially separated, people haveto travel. Consequently, analyzing individual activity patterns leads to a better understanding of travel behavior, and that assumes that activity patterns are determined by (1) the propensity to engage in an activity, and (2) the opportunity to engage (Chapin, 1974, as cited in Ewing and Cervero, 2001). The propensity to engage is a function of individual characteristics such as motivations and way of thinking, and roles and socio-economic characteristics. The opportunity to engage refers to the individual's perception of the availability of opportunities, and the quality of these opportunities. In other words, it refers to the perceived environment in which activities are performed.

The Concept of Sharing Economy

The landscape of consumer behavior is changed by collaborative consumption, which is also known as sharing economy. Sharing economy transforms the way in which consumers purchase and use products (Kathan, Matzler, and Veider, 2016; Zhang, Gu, and Jahromi, 2018). A lot of definitions for the sharing economy have been given (Böcker and Meelen, 2017). Frenken and Schor (2017) mentioned that those definitions of the sharing economy are not opposing in nature but improvement and are taking shape with the level of inclusivity and variety in scope. According to Parente, Geleilate, and Rong (2018), the term "sharing economy" is used to "describe different organizations that connect users/renters and owner/providers through consumer-to-consumer (C2C) or business-to-consumer (B2C) platforms, allowing rentals in more flexible, social interactive terms." A lot of researches conversed the idea of the sharing economy as the right to use the underutilized commodities over ownership known to be as peer-to-peer sharing. The researcher adopted the definition of Böcker and Meelen (2017) on the sharing economy that is as "the consumers granting each other temporary access to their underutilized physical assets ('idle capacity') for a fee."

In the context of this study, sharing economy in the transportation sector is known as ridesharing or TNVS. TNCs with the use of software application allow drivers and passengers with similar origins and destinations to share a ride (Jin, Kong, Wu, and Sui, 2018). Recent literature on the ridesharing focuses on identifying users' satisfaction (Zhang, Gu, and Jahromi, 2018). Lutz and Newlands (2018) studied how consumer segmentation within a single-sharing economy platform would be applied while Bocker and Meelen (2017) studied how to motivate people to participate willingly in different forms of the sharing economy. Other studies investigate sharing services in the service industries (Kim, Woo, and Nam, 2018), identify the leading reputational attributes that boost popularity in sharing economy platforms (Mauri, Minazzi, Nieto-García, and Viglia, 2018), and develop a framework to guide future research drawing from a business ecosystems perspective (Parente, Geleilate, and Rong, 2018).

The Expectation-Confirmation

The Expectation-Confirmation Theory (Oliver, 1980) considers satisfaction of an individual as the outcome of evaluation between perceived reality and their expectations. In the expectation–confirmation model (ECM) of information system continuance, the feasibility of an information system depends on its continued patronage; frequency of utilization, which is associated by continuance intention, is determined by user satisfaction and perceived usefulness whereas user satisfaction by confirmation of expectations and perceived usefulness.

Review of Related Literature

The patronage of the ridesharing on TNVS of Grab commuters is anchored on the motivational factors, namely: economic benefit, perceived usefulness, trust, environmental impact, and TNVS quality. These factors positively determine satisfaction; satisfaction, additionally, also influences the patronage of TNVS.

Economic Benefits

Many researchers mentioned that spending money and resources is the primary concern of the consumers (Chudzian, 2015; Gansky, 2010; Tussyadiah,2015). The main drivers of ridesharing or TNVS are economic ones, reinforced by economic problems and the need to save (Mattsson, 2016). A new means of consumption emerges as a result of these changes (Botsman and Rogers, 2011). Society, economy, and technology are three drivers of sharing economy (Tussyadiah, 2015) of which the most widely identified motivational factors of sharing is the economic aspect (Hamari, Sjöklint, andUkkonen, 2016; Mohlmann, 2015; Schiel, 2015).
Thus, it is hypothesized:

H_1: *Economic benefits have a positive effect on the satisfaction of TNVS commuters.*

Perceived Usefulness

Perceived usefulness is defined as “the extent to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989). Previous study points to the association of perceived usefulness to the repeat utilization of the service (Chiu and Wang, 2008), while the perceived usefulness positively affects the repeat utilizationof the service. Perceived usefulness is an important determinant of satisfaction in the web-based learning and social networking sites(Yin, Liu, and Lin, 2015)and mobile instant messaging (Oghuma, Libaque-Saenz, Wong, and Chang, 2016). In this context, perceived usefulness refers to the degree to which TNVS users think that by using its services, a trip could be stress-free and more efficient.
Thus, it is hypothesized:

H_2: *Perceived usefulness has a positive effect on satisfaction of TNVS commuters.*

Trust

Trust is considered as a subjective feeling that the trustee will behave in a certain way basedon an implicit or explicit assurance he or she makes (Ert, Fleischer, and Magen, 2016). Trust has been regarded as a significant driver in the context of information system practice (Pavlou, 2003). According to Barnes and Mattsson (2016),“establishing trust is one of the main inhibitors to collaborative consumption.”It is among the most important factors to elucidate satisfaction in a sharing economy and the chance of selecting it again (Mohlmann, 2015). Putting this in the context of TNVS,the researcher believed that if users find TNCs trustworthy, the commuters of Metro Manila may engage with TNVS. Furthermore, the relationship may continue if they trust the TNCs.
Thus:

H_3: *Trust has a positive effect on the satisfaction of TNVS commuters.*

Environmental Impact

Sharing economy decreases the production of final products and the utilization of the raw materials; hence, it is expected to decrease the damaging impact on the environment (Botsman and Rogers, 2011; Chudzian, 2015; Tussyadiah, 2015). Ridesharing minimizes vehicle ownership, allowing commuters to save assets (Antoniou, Efthymiou, and Waddell,2013). Environmental impact could influence the level of satisfaction and motivation ofTNC usersto continue

patronizing the service. Accordingly, successful rideshare schemes could reduce congestion and related fuel consumption and emissions during peak travel periods, reduce parking costs for travelers and employers, and provide a reliable alternative mode to private car (Alexander and Gonzalez, 2015; Amey, 2004; Yin, Liu, and Lin, 2016).
Thus:

H₄*: Environmental impact has a positive effect on the satisfaction of TNVS commuters.*

Service Quality

Quality is an essential aspect of a service not only in public transportation.The difference between customers' expectations and perceptions of the service is called service quality (Parasuraman, Zeithaml, and Berry, 1988).It can also be defined as "the consumers' overall impression of the relative inferiority/superiority of the organization and its services" (Bitner and Hubbert, 1994).Previous study has proven that customer satisfaction is related directly to service quality. There is a growing support related to the positive impact of service quality in many research studies on the sharing economy (Mohlmann, 2015) and other contexts such as patronage among mobile data services users (Boakye, 2015), information exchange virtual communities (Zheng, Zhao, and Stylianou, 2013), and service industries (Erjavec, Dmitrovic, andBrzan, 2016). According to Awasthi et al. (2011), managing service quality is vital to retain customer satisfaction and augment revenues for any business organization.

In a study by Sanjuq (2014), it was found that there is a positive relationship among assurance, empathy and responsiveness on customer satisfaction. In the context of TNVS, users of TNCs will be more likely to use the service again after having positive experience with the service. The TNVS qualities are important for the commuters to have positive experience. According to Hensher (2003), driver's competence and behavior areessential for any transportation service especially for public transport. Convenience of service is one of the important attributes of a quality service (Hu and Jen 2006), while comfort is a vital aspect of transportation service (Nathanail, 2008). Additionally, the reliability of the service affects positively the satisfaction of customer (Salameh and Hassan, 2015). Providing good services and fulfilling promises help develop an effective rapport that will eventually affect customers' satisfaction.
Thus, it is hypothesized:

H₅*: TNVS Quality has a positive effect on the satisfaction of TNVS commuters.*

Satisfaction

Consumer satisfaction, which is the overall evaluation of a consumer's total purchasing and consumption experience with products or services over a period of time, is indispensable to have longevity in the business (Erjavec et al., 2016; Karatepe, 2011; Moriuchi and Takahashi, 2016; Oliver, 1980). It is important to produce and sustain a loyal base of long-term consumers (Gracia, Ariño, and Blasco, 2015; Kumar, Dalla, and Ganesh, 2013).

Customer satisfaction has increasingly become a key indicator to measure performance and an essential component for organizational success. Customer satisfaction is the feeling of contentment or discontentment of customers that comes about as a result of a comparison between the performance of a product or service and their expectations prior to the experience (Chaiyasoonthorn andSuksa-ngiam, 2011). Customer satisfaction is proven to be related directly to service quality. Companies should welcome feedback regarding the problems that customer experienced and value the suggestions given by them to enhance the quality of their service or product to affect customer satisfaction (Ojo, 2010).

The explanation showed that customer satisfaction is driven by the expectations of customers and it is a determinant of customer purchase intents and their loyalty to the brand. Recently, companies are channeling their efforts to have a high level of customer satisfaction to retain their existing clientele instead of spending additional funds to attract new ones. Companieshave placed customers at the center of their operations to keep them satisfied to gain their loyalty in order to maximize their market share (Sabir et al., 2014).

Patronage of Service

Patronage of the service is defined according to customer's likelihood to continue using the service in the future and to recommend it to others (Anderson and Sullivan, 1993; Van Lierop and El-Geneidy, 2016). In the context of this study, patronage captures the degree to which Metro Manila commuters will increase the frequency of utilizationof TNVS. The positive association between satisfaction and patronage is well-established by previous studies (Bhattacherjee, 2001; Hsiao, Chang, and Tang, 2016; Kaewkitipong, Chen, and Ractham, 2016; Karatepe, 2011; Mohlmann, 2015).
Thus, it is hypothesized:

H*$_6$*: *Satisfaction has a positive effect on the patronage of TNVS commuters.*

Conceptual Framework

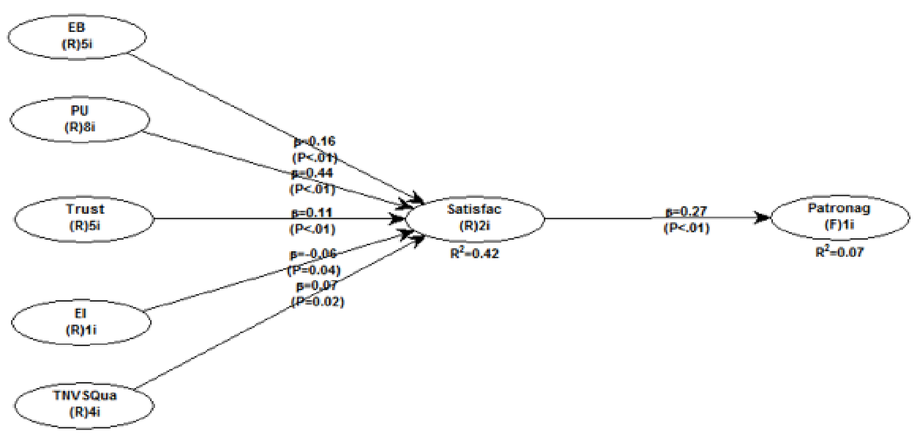

Figure 1.

Framework showing the effect of the motivational dimensions to the satisfaction and patronage on TNVS

The conceptualized model shows the effect of the motivational dimensions of travel behavior on the level of satisfaction that would eventually lead to patronage/increased utilization of TNVS. These motivational dimensions are economic benefit, perceived usefulness, trust, environmental impact, and TNVS quality, which can be used to develop the model for the circular flow of sustainable transport network vehicle services operation.

METHODS

Subject and Study Site

The study is focused in Metro Manila, which is considered highly urbanized and the most populous region in the Philippines, having 22.7 million occupants (PSA, 2018). This vast number of people living in this area needs better transportation system to meet the daily demand of commuters. It hasa high demand for TNVS (Cu, 2018). Students and non-students were purposively chosen as respondents of the study.

Respondents were chosen based on the criteria that they are regular Grab riders and they use TNVS at least four times a week. **Snowball sampling** was employed to ensure that every city will be represented. Exclusion method was also used since the focus is on the regular TNVS users only.

Data Collection

The questionnaire was distributed to the surveyed respondents with the help of student assistants and TNVS drivers. Snowball sampling method was used to ensure that every city in Metro Manila was represented well. It was done in separate days within the two-month period from May to June of 2018.It was administered in different time modes: the peak hours, the low period and the late night, to ensure that different demands for the transport service were met.

Instrumentation

The survey questionnaire was researcher-prepared, crafted based from the different literatures and supported by different theories. It was divided into 6 parts: (1) the profile of the respondents; (2) the purpose of their travel; (3) the motivational dimensions; (4) the TNVS attributes, which measures the quality service of TNCs; (5) the open statements regarding the problem they encountered; and (6) their suggestions for the improvement of service.

Part 2 had 11 multiple response items to determine the respondents' purpose of their trip. Part 3 was where participants were asked about their level of agreement on the given factors of motivations on availing TNVS. These factors were economic benefits, perceived usefulness, trust, satisfaction (Sa), and environmental impact (EI). These items were evaluated on a 6-point Likert-type scale, from (1) stronglydisagree to (6) strongly agree.Part 4included the attributes of TNVS, namely: driver's competence and behavior; commuter's comfort and convenience; assurance of the TNC; and reliability of the system. On a 6-point Likert-type scale, from (1) extremelydissatisfied to (6) extremely satisfied, respondents were asked to rate their level of satisfaction given those attributes.

In addition, there were open-ended statements regarding the problems encountered by commuters and their suggestions for the improvement of the TNVS.

Pilot testing of the instruments was done before actual administration. With the use of SPSS version 20, each construct's Cronbach Alpha was calculated to determine the internal consistency of items to gauge its reliability (Santos, 1999). All motivational dimensions, namely: Economic Benefit construct has a Cronbach Alpha of 0.760, Perceived Usefulness'Cronbach Alpha is 0.764, Trust'sCronbach Alpha is .723, and Satisfaction's Cronbach Alpha is 0.781. The TNVS quality, such as driver's competence, has 0.857; commuter's comfort and convenience has 0.890; assurance of TNC has 0.767; and reliability of the system has 0.891 Cronbach Alpha. Hence, the result of pilot testing showed that the survey questionnaire is reliable to use.

Data Analysis

Both descriptive and inferential statistical analyses were used. Descriptive statistics such as mean, standard deviation, frequency, and percentage were used in describing profile of the respondents and the travel characteristics of the respondents of the sample population. To compare if there were differences in the perception of the respondents regarding their satisfaction on motivational dimensions of TNVS when grouped according to their profile, t-test and ANOVA were used. The hypotheses of this study were tested using Structural Equation Modeling (SEM). The open-ended responses were analyzed by culling method and were classified under a specific dimension. The processing of data was made possible using SPSS version 20 and WARP PLS version 5.0.

Confirmatory Factor Analysis (CFA) with WARP PLS 5.0 was used to check the reliability and validity of the latent variables in the model. PLS algorithm confirmed that all the items are good indicators except some items on perceived usefulness (PU1 and PU2). These items were dropped from the model. Composite Reliability (CR) showed values higher than .700, confirming the internal consistency of the measurement model (Peterson, 1994). Thus, the reliability of the measurement model was confirmed.

Ethical Consideration

Prior to the administration of the survey, the researcher observed ethical considerations such as proper communication and informed consent; observance of anonymity and confidentiality; no force, threat or intimidation was used and the participants have the option to withdraw from answering should they desire to do so.

RESULTS

Characteristics of the respondents

Of the 877 respondents, 449 or 51.2% were students and 428 or 48.8% were non-students who were regular Grab riders. For both types of respondents, majority of the Grab riders were female (student: 279 or 62.1%, non-student: 232 or 54.2%). More than half of the respondents were single (student: 436 or 97.1%, non-student:232 or 54.2%). 67.5% of the students were less than 20 years old while 65% of the non-students were less than 30 years old. 90.6% or 407 out of 449 were attending a private school with 73.2% of them have less than P10000 monthly allowance. For the non-students, 67.5% or 289 out of 428 were employed in a private sector and 63.5% of them have lower than P30000 monthly income. 80.6% of the student riders have 2 or less car ownership per household and 75% or 337 use dual intermodal public transport to reach their destination while 86.4% of the non-student riders have 2 or less car ownership per household and 78.5% or 336 use dual intermodal public transport to reach their destination. The average number of rides per week for the student riders was 5.89 with standard deviation of 2.14 while the average number of rides per week for the non-student riders was 6.18 with standard deviation of 2.28.

Purpose of using TNVS

Multiple Response

Table 1 shows the purposes why commuters avail TNVS in their journey. The top three purposes for student commuters using TNVS are going to mall (97.1%), going to school (94.9%), and dining out (94.2%). While the non-student commuters' top three purposes for using TNVS were going to mall (95.8%), visiting friends and dining out (95.6%) and work commuting (94.9%). Notably, most of the commuters prefer TNVS for their leisure activities and as their mode of transportation going to their place of work.

Table 1 ***Respondents' Purposes for using TNVS***

Purpose of Trip	**Student**		**Non-student**	
	N = 449		**N = 428**	
	n	**%**	**n**	**%**
a. Work Commute	304	67.7	406	**94.9**
b. School Commute	426	**94.9**	369	86.2
c. Business Trip	288	64.1	370	86.4
d. Social/Recreational (Lifestyle)				
1. visiting friends/relatives	420	93.5	409	**95.6**
2. going to mall	436	**97.1**	410	**95.8**
3. going to park	328	73.1	309	72.2
4. dine out	423	94.2	409	**95.6**
5. going to party	408	90.9	357	83.4
e. Others				
1. doctor visits	351	78.2	372	86.9
2. going to church	353	78.6	353	82.5
3. buy groceries	338	75.3	365	85.3

Satisfaction on the TNVS quality

Table 2 ***Comparison in the Level of Satisfaction of the Respondents on the TNVS Quality***

TNVS Quality	(1) Non-Student		(2) Student		t-value	Interpretation of Mean
	N = 428		N = 449			
	Mean	SD	Mean	SD		
Competence of Driver	4.64	0.92	4.45	0.74	3.54**	Highly satisfied
Comfort and convenience of commuters	4.91	0.79	4.67	0.87	4.24**	Highly satisfied
Assurance of the TNC's	4.37	1.05	4.08	0.98	4.13**	Highly satisfied
Reliability of the System	4.52	0.94	4.54	0.91	0.91	Highly satisfied

** Significant at p <.01

* Significant at p <.05

Table 2 shows the comparison in the level of satisfaction of the two groups of commuters on the TNVS qualities. Results revealed that both group of commuters were highly satisfied on the TNVS attributes, namely: competence of the driver, commuter's comfort and convenience, assurance of the TNC, and reliability of the system. Notably, there is a significant difference in the level of satisfaction of the respondents on the following qualities of TNVS: competence of driver ($Mean_1$= 4.64, $Mean_2$= 4.45, t= 3.54**), comfort and convenience of commuters ($Mean_1$= 4.91, $Mean_2$= 4.67, t= 4.24**), and assurance of the TNC($Mean_1$= 4.37, $Mean_2$= 4.08, t= 4.24**) but no significant difference on reliability of the system ($Mean_1$= 4.52, $Mean_2$= 4.54, t= 0.98).

Remarkably, both groups of respondents considered comfort and convenience of commuters as their number one quality while they rated assurance of the TNC as the last quality that would satisfy them in using TNVS.

Motivational dimensions of TNVS commuter

Table 3 ***Level of Agreement on the Motivational Dimensions of TNVS Commuters***

Motivational Dimension	(1) Non-Student N=428		(2) Student N=449		t-value	Remark
	Mean	SD	Mean	SD		
Economic Benefits	4.25	0.85	3.70	0.91	9.13**	Significant diff.
Perceived Usefulness	4.60	0.63	4.40	0.62	4.65**	Significant diff.
Trust	4.75	0.75	4.59	0.77	3.19**	Significant diff.
Environmental Impact	4.18	1.50	3.94	1.52	2.42**	Significant diff.
TNVS Attributes	4.61	0.71	4.42	0.70	4.03**	Significant diff.

** Significant at p <.01

* Significant at p <.05

Table 3 shows the comparison between non-student and student'slevels of agreement on the motivational dimensions of travel behavior using TNVS. Results revealed that both groups of commuters strongly agreedthat the five dimensions, namely:

economic benefit,perceived usefulness, trust, environmental impact and the TNVS Quality, were the motivating factors for using TNVS but there is a significant difference in the level of agreement on competence of driver ($Mean_1$= 4.64, $Mean_2$= 4.45, t= 3.54**), comfort and convenience of commuters ($Mean_1$= 4.91, $Mean_2$= 4.67, t= 4.24**), and assurance of the TNC($Mean_1$= 4.37, $Mean_2$= 4.08, t= 4.24**) andno significant difference on the reliability of the system ($Mean_1$= 4.52, $Mean_2$= 4.54, t= 0.98). Notably, among the qualities of TNVS, both non-student and student respondents considered "comfort and convenience of commuters" as their number one quality. On the other hand, although both groups of respondents rated "assurance of the TNC"($Mean_1$= 4.37, $Mean_2$= 4.08, t= 4.24**) with highly satisfaction, it has thelowest rating.

Problems and complaints of TNVS commuters

Table 4 ***The Problems and Complaints of the TNVS Commuters***

Problems Encountered	**n**	**%**	**Rank**
Asking for tips	4.00	2.63	3
Cancellation of booking	114.00	75.00	1
Car maintenance	3.00	1.97	4
Driver's attitude	20.00	13.16	2
Too long to book	3.00	1.97	4
High Fare	4.00	2.63	3
System problem on location	1.00	0.66	5
Surge	3.00	1.97	4
	152	100	

Table 4 shows the frequency of the complaints stated by the TNVS commuters. Out of 877 respondents, only 152 were able to state their problems encountered when they avail TNVS. The number one problem of the TNVS commuters is the cancellation of booking, 75% (114 out of 152), followed by the attitude of drivers 13.16% (20 out of 152). The third one is the high fare and the drivers who were asking for tip (4 out of 152).

Table 5 ***Suggestions given by the TNVS Commuters***

Suggestions	**n**	**%**	**Rank**
Driver must be kind	1	0.70	6
Driver must be patient	1	0.70	6
Better pricing scheme	4	2.82	3
Maintenance of car	4	2.82	3
Observe the proper attitude while driving	**113**	**79.58**	**1**
Don’t cancel the booking	1	0.70	6
accept booking especially during bad days	1	0.70	6
be wise in taking the shortest route	2	1.41	4
must be mindful of passenger	2	1.41	1
Driver must be careful	1	0.70	5
Driver must be accommodating	**5**	**3.52**	**2**
Don’t ask for a tip	2	1.41	5
Terminate drivers who are rude	2	1.41	5
Provide promotion	1	0.70	6
Driver should be service oriented	1	0.70	6
Low Surge fee	1	0.70	6
	142	100	

Table 5 shows the suggestions given by the TNVS commuters. Out of 877 respondents, only 142 (16.19%) of the respondents were able to provide valuable suggestions, which must be considered in the recommendation to improve the satisfaction of the commuters. Most of the respondents want their ride to be safe and comfortable; they want the driver to observe the proper attitude while driving (79.58%). Another important suggestion of the commuters was they want the driver to be accommodating (3.52% or 5 out 142). The third most important for the commuters is that TNC must have better pricing scheme and the need to proper maintenance of car (2.82% or 4 out 142).

The confirmatory factor analysis of TNVS quality

Table 6 Confirmatory *Factor Analysis of TNVS Quality*

TNVS Quality	Regression Weights
Competence of Driver	
1. TNVS drivers are not reckless drivers (tendency to over speed and snake-driving).	0.714
2. The drivers are fully knowledgeable of the route.	0.808
3. Drivers have the tendency to take the shortest route possible.	0.763
4. Drivers follow the traffic rules and regulations.	0.794
Comfort of commuters	
1. The car is well-maintained	0.838
2. The car is new, clean and a good working air- conditioner.	0.903
3. The ride is convenient and not stressful.	0.884
Assurance to the commuters	
1. The passenger is not denied for a ride in whatever destination.	0.746
2. Drivers do not overcharge or ask for compulsory tips over the stated amount.	0.874
3. Drivers are courteous and mindful of passengers.	0.766
Reliability of the System	
1. Securing a ride is quick through the cellphone application.	0.856
2. The estimated time of arrival for pick up stated in the App is accurate.	0.856

Table 6 shows the Confirmatory factor analysis of TNVS Quality. Results showed that the dimensions of the four criteria, namely competence of the driver, comfort and convenience of commuters, assurance of the TNC, and reliability of the system, were good indicators of TNVS quality as perceived by commuters.

Comfort and convenience of commuters (β=0.847) and reliability of the system (β=0.846) were the strongest indicators among the others. The car condition, like its newness, cleanliness and whether it has a good air-conditioning unit, is the highest indicator (β=0.903), followed by on whether the ride is convenient and not stressful (β=0.884). Under the reliability of the system criterion, "securing a ride is quick through the cellphone"and "the estimated time of arrival for pick up stated in the application is accurate" (β=0.856) were both good indicators of reliability.

Table 7 ***Confirmatory Factor Analysis of the Motivational Dimensions***

Motivational Factors	Regression Weight
Economic Benefit	
1. I can afford TNVS because of the kind of allowance/employment that I have.	0.91
2. My salary/allowance is enough to allow me to take TNVS.	0.78
3. I find it cheaper to use TNVS rather than my own car.	0.70
4. TNVS is worth its price.	0.62
5. I find it more practical to use TNVS rather my own car because of the high price of gas.	0.67
Perceived Usefulness	
3. The availability of the usual public transportation from my place to my work is quite limited.	0.51
4. It will take me several transfer rides from my place of origin to my chosen destination.	0.77
5. My job/schedule allows me telecommuting or flexibility so I could commute at my own pace and duration.	0.52
6. I find TNVS transport convenient.	0.68
7. I find TNVS time-efficient.	0.57
8. I prefer a more comfortable mode of transportation when I go out for leisure.	0.58
9. I find it very difficult to get a ride for jeepneys and buses during bad weather.	0.55
10. TNVS transport provides convenience especially when it is raining or during a very hot weather	0.71
Trust	
1. A good level of information on driver is managed by the TNC.	0.59
2. A good level of information on estimated time of arrival is managed by TNC	0.63
3. A good level of information on fare is managed by the TNC.	0.65
4. A good level of information on direction is managed by the TNC.	0.63
5. I take TNVS whenever I need to go to unfamiliar places.	0.62
TNVS Quality	
1. Driver's competence	0.69
2. Commuter's comfort and convenience	0.67
3. Assurance of the TNCs	0.76
4. Reliability of the system	0.62

Table 7 depicts the CFA of motivational dimensions of travel behavior of TNVS riders. Results showed that under the economic benefit dimension, riders perceived that the affordability of TNVS is related to the kind of allowance/employment they have (β=.91). The least indicator of economic benefit is that TNVS is worth its price (β=.62).

Under the perceived usefulness dimension, the first two items were dropped because the p-values were greater than .05. The number one indicator of perceived usefulness dimension was thatriders will take several transfer rides from their place of origin to their chosendestination (β=.77).

With the trust dimension, riders perceived "a good level of information on fare is managed by the TNC" (β=.65) as the number one indicator. While "a good level of information on driver is managed by the TNC" β=.52) is considered the last indicator.

For the items on TNVS quality dimension, riders perceived the "assurance of the TNCs" (β=.76) as the number one indicator. While "reliability of the system" β=.62) is considered the last indicator.

The emerging model

Table 8. ***Model Fit Indices for SEM Model***

Model Fit Indices	Value
Average path coefficient (APC)	0.183
Average R-squared (ARS)	0.244
Average adjusted R-squared (AARS)	0.242
Average block VIF (AVIF)	1.986
Average full collinearity VIF (AFVIF)	1.968
R-squared contribution ratio (RSCR)	0.954

To show the acceptability of the emerging model as compared to the hypothesized model, the table shows a list of model fit indices. The emerging model has APC = .183, ARS = .244 and AARS = .242, which are all significant at .01 level and indicate good model fit of the data. The said model also shows an acceptable AVIF = 1.973, AFVIF = 1.943, which is less than 5 and thus indicates that there are no other latent variables that overlap in the meaning of the existing latent variables. R-squared contribution ratio (RSCR = 0.950) is greater than .90, which indicates that there are no negative R-squared contributions in a model.

The structural equation model reveals that the conceptual framework exhibited the adequacy of the emerging model to be accepted based on the following model fit indices. The conceptual framework (Figure 1) purported to test a hypothesized model that shows the effect of motivational factors on the level of satisfaction of the TNC's services. Structural equation analysis leads to the development of an emerging model. The model is revealed by the acceptable values of the model fit indices (see Table 9).

Table 9 ***Path Coefficients and P-values***

Path	Path coefficients	P -values	Effect Sizes	Effect Size Interpretation (Cohen, 1988)**
Economic benefit→Satisfaction	.158	<0.001	.068	Small
Perceived usefulness→Satisfaction	.435	<0.001	.281	Medium
Trust→Satisfaction	.105	<0.001	.059	Small
Environmental Impact→ Satisfaction	-.059	.0400	.025	Small
TNVS Quality → Satisfaction	.068	.021	.033	Small
Satisfaction → Patronage	.270	<0.001	.073	Small

***0.02 – small, 0.15 – medium, 0.30 – large*

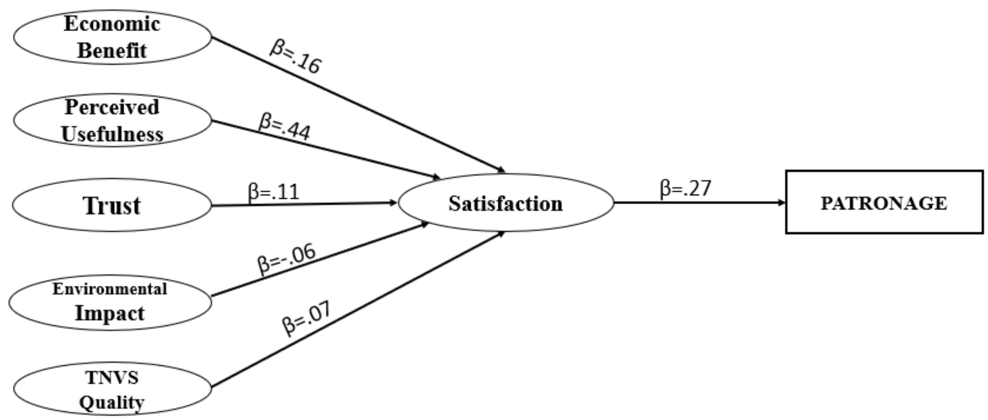

Figure 2. **The Emerging Model**

The model proves that all hypotheses must be accepted at an Alpha less than .05 except hypothesis 4. The first hypothesis that "economic benefit has a positive effect on the satisfaction of TNVS commuters" ($\beta = .16$, $p < .01$) must be accepted, which indicates that an increase in the economic benefit score results to an increase in the satisfaction of the TNVS commuters. Further, we can note significant total effect of economic benefit on satisfaction although the effect is just small, as suggested by the scale of Cohen (1988).

The second hypothesis "perceived usefulness has a positive effect on satisfaction of TNVS commuters" ($\beta = .44$, $p < .01$) must be accepted.This indicates that an increase in the perceived benefit score results to an increase in the satisfaction of the TNVS commuters. Further, we can note medium significant total effect of perceived benefit on satisfaction (Cohen, 1988).

The third hypothesis is "trust has a positive effect on the satisfaction of TNVS commuters," and the last hypothesis is "satisfaction has a positive effect on the frequency of utilization (patronage) of TNVS commuters" ($\beta = .11$, $p < .01$).

The fourth hypothesis is "environmental impact has a negative effect on the satisfaction of TNVS commuters" ($\beta = -.06$, $p < .05$). Hence, this hypothesis must be rejected. This indicates that an increase in the environmental impact score will not increase the satisfaction of the TNVS commuters.

The fifth hypothesis that TNVS quality has a positive effect on the satisfaction of TNVS commuters ($\beta = .07$, $p < .01$) should be accepted. It implies that an increase in TNVS quality score results to an increase in the satisfaction of the TNVS commuters.The last hypothesis that satisfaction has a positive effect on the patronage/increase utilization of TNVS ($\beta = .07$, $p < .01$) should be accepted. It implies that an increase in satisfaction score results to an increase in the patronage/increase utilization for TNVS.

DISCUSSION

The main purpose of the study is to provide a model illustrating the effect of motivational dimensions of travel behavior of TNVS riders/commuters on their satisfaction, which would eventually lead to the increase in utilization or patronage for TNVS for the sustainable operation of the TNCs.

Results have supported the first hypothesis (H1) that economic benefits have a positive yet small impact on the satisfaction of TNVS commuters. This indicates thatTNVS riders were motivated to use TNVS provided that the price is economical. So saving money or financial benefits constitute a reason for using the TNVS (ridesharing).The result of this study is similar to the studies conducted by Barnes and Mattsson (2016) and Hamari et al. (2016).

In addition, the study reveals that the perceived usefulness is the strongest determinant of TNVS user satisfaction, and this has supported the second hypothesis (H2) that perceived usefulness has a positive effect on satisfaction ofTNVS commuters. This indicates that TNVS riders use TNVS if the availability of the usual public transportation from their place to their work is quite limited. The study provided empirical evidence that perceived usefulness leads users to be more satisfied. This result is in line with the results in other contexts (Boakye, 2015; Zheng et al., 2013).

Additionally, results support the third hypothesis (H3) that trust has a positive but only small effect on the satisfaction of TNVS commuters. It is important, therefore, to manage adequately the community that participates in the sharing service, because it will help create a trustworthy environment that will satisfy their users.Regarding trust, little empirical evidence has been provided when assessing the motivational factors of sharing economy, as Mohlmann (2015).

Results did not support the fourth hypothesis (H4) that environmental impact has a positive effect on the satisfaction of TNVS commuters. The result is parallel to other studies (Barnes and Mattsson, 2016; Mohlmann, 2015) that environmental advantages are not considered relevant for TNVS users, rather it is in contrast with the idea that an increasing awareness of environmental pressure leads people to try to find ways tohave a more sustainable society (Gansky, 2010).

Furthermore, the fifth hypothesis (H5) is that TNVS qualities have a positive effect on the satisfaction of TNVS commuters. This result was supported by the studies conducted by Mohlmann (2015) that service quality has a positive impact on the sharing economy. The qualities of TNVS, such as “comfort and convenience”(Hu and Jen, 2006;Nathanail, 2008), reliability of the service (Salameh and Hassan, 2015), driver’s competence and behavior (Hensher,2003) and assurance (Sanjuq,2014), were all consistent with the result of the study.

Lastly, there is enough evidence to accept the sixth hypothesis (H6) that satisfaction has a positive effect on the patronage of TNVS commuters. In line with this, results have indicated that satisfaction of TNVS riders leads to patronage (increase utilization) of TNVS. This result was confirmed by the study conducted by Mohlman (2015) that the satisfaction of user has a positive effect in the sharing economy. Remarkably, the role of satisfaction as a mediating variable to motivational dimensions and patronage was well established.

CONCLUSION

This study attempted to develop a model that would be used to have a basis for circular flow of sustainable TNVS operation.

The travel behavior has changed in recent years, and the sharing economy is an essential part of this transformation. Grab is the only ridesharing company that provides TNVS in Metro Manila.

This study provides an innovative model to study how different motivational factors lead ridesharing users to be more satisfied, which ultimately leads to patronage. Böcker and Meelen (2017) acknowledged that “the study of user motivations is important for evaluating whether the innovation can really make a shift towards a more sustainable society,” and this sustainable transition implies the change of consumer criteria (Kemp and van Lente, 2011). Thus, the emerging model also contributes to the literature as a new determinant of user satisfaction and patronage in the sharing economy.

The researcher found that satisfaction of TNVS users is driven by economic benefit, perceived usefulness, service quality, trust, and the TNVS quality. The researcher found that the satisfaction of TNVS users will influence the patronage of the service, which will eventually lead to sustainable TNVS operation. Based on the results, commuters were experiencing a lot of problems regarding TNVS, especially the cancellation of bookings during rush hour, the rude attitude of the drivers, and the high fare during rush hours. These complaints affect the level of satisfaction of the TNVS riders, which can affect their utilization of this service. The suggestions given by the commuters must be considered carefully since they are the ones who avail the service and they know exactly what they want in a product or service. The TNCs must design a plan that would address the issues of the commuters.

The study revealed that the environmental impact is not a determinant of the motivational factor of the commuter for them to use TNVS. With this result, management of TNCs should also emphasize the environmental benefits of sharing and work toward the creation of a trustworthy community. This study helps managers of sharing services to redefine their communication strategies to retain users, achieve performance-related goals, and develop competitive advantages.

For managers of traditional services, this study can also help to gain a deeper understanding of new trends in consumer behavior, allowing a better knowledge of the changing environment.

The characteristics of the Grab riders were so diverse that require a good marketing strategy to meet if not exceed their expectations regarding TNVS. The result of this study can be used as baseline information to improve its product or to provide service. Thus, using the results of this study, the management of the TNCs can develop appropriate marketing strategy to capture their target market. Knowing these motivational dimensions can be an advantage for marketing TNVS since proper marketing strategies may be applied to capture bigger market share.

The researcher wants to propose a model that would be applicable for the TNVS operation that would guarantee sustainability. It is based on the circular flow ofeconomic activity (Quesnay, 1758, in Faik, 2015). We can also describe the circular flow of sustainable TNVS operation, which is operationally illustrated in Figure 3.

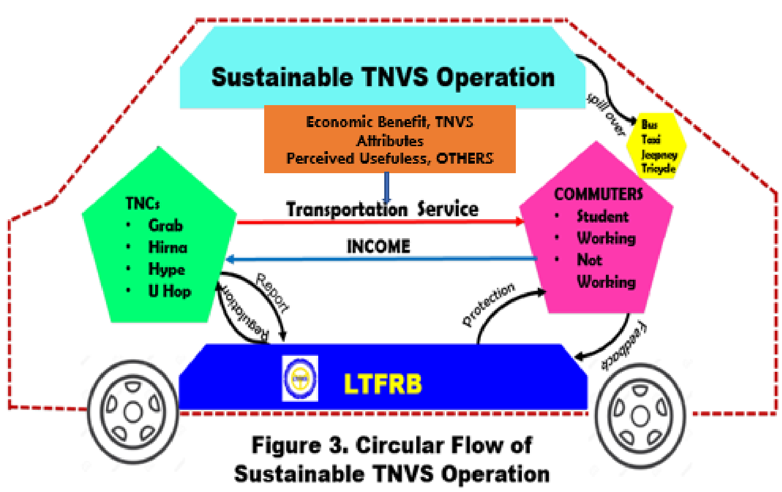

Figure 3. Circular Flow of Sustainable TNVS Operation

The Circular Flow of Sustainable TNVS Operation

In this flow, Utility Maximizing Theory and Expectation-Confirmation Theory recognize that commuters are willing to compromise if they will gain more satisfaction in terms of comfort, assurance, safety and reliability of service. The management of TNCs must entail a conscious assessment of the needs of the commuters precisely because they must establish and maintain the objective purpose of the act of servicing the riding public to help improve the quality of human life.

Furthermore, the TNCs are not simply provider of service but are also receivers of income from the riding public. The symbioticrelationship between TNCs and commuters is supervised by LTFRB under LTO, a government agency that provides the mechanisms to ensure safe and convenient transportation to the riding public.

On the left side of the framework, there is also a flow of resources between the government agency and the TNCs. LTFRB must regulate the operations of TNCs by providing guidelines and in return, TNCs are expected to follow and give regular reports to this agency. Further, there is a larger social objective to LTFRB that extends beyond the intrinsic value of the regulation by generating a radial effect to a wider economy inclusive of other transportation modes such as taxi, FX/van, bus, and jeepney.

On the right side, the commuters should give feedback to the LTFRB regarding the problems they have encountered in availing TNVS. Based on the feedback, LTFRB should act accordingly. In the long run, the exchange of resources (service and income) between TNCs and commuters may go beyond the mediation of the LTFRB as ideal relationships are formed between them.

It is envisioned that the model circular flows contribute to a larger goal of sustainable TNVS operation. Further, it is expected that the model conceptualized in this study shall not merely stay as a research concept but shall evolve to become an essential reality in the conduct of operations not only by TNCs but by other transportation modes as well.

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Guide to Contributors

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