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Correlation on Mindfulness, Self Esteem and Impulsive Buying Among Female Online Shopper

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Abstract

Indonesian consumers are starting to like online shopping along with the increasing number of internet users in Indonesia. However, this fondness of online shopping in Indonesia shows that shopper trend in Indonesia is growing more impulsive every year. If shopper buy things impulsively without thinking and aware of their buying behavior then that shopper might be not mindful enough about their shopping behavior. Aside from mindfulness, shopper state of self-esteem might also be the cause of buying things impulsively. The purpose of this research is to see correlation on three variables which consisting of mindfulness, self-esteem, and impulsive buying among female online shopper. After the selection process, the participant used in this research consisted of 228 female online shopper with habit of doing online shopping at least once every two months. This study use quantitative research design with using three scale in form of questionnaire (FFMQ to measure mindfulness, RSES-R to measure self-esteem, IBTS to measure impulsive buying). All three scale shows good reliability and validity. Data analysis result showed that mindfulness have positive significant relationship with impulsive buying and self-esteem. On the other hand, self-esteem don't have significant relationship with mindfulness. This result is not what to be expected because from previous literature showed that there should be correlation between self-esteem and shopping behavior. One of the possibility to explain this result might be that excessive consumption like compulsive buying is more apparent in online shopping than impulsive buying. Further study need to be done to explore this issue.

Keywords: mindfulness, self-esteem, impulsive buying, online shopping

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Introduction

As the development of technology and internet facilities then one can buy goods without having to travel far to buy the goods. Shopping through the internet (online shopping) turns into something that can be done anywhere and anytime through mobile phone which has become a product that many found in Indonesian society today. According to Nielsen Indonesia (Lubis, 2014), Indonesian consumers are starting to like online shopping along with the increasing number of internet users in Indonesia. They love to read reviews and search for information about products and services needed. The most commonly used device for online shopping is mobile phones. According to the report (Lubis, 2014), Indonesia is at the top of the globe in terms of using mobile phones for online shopping along with the Philippines, Vietnam, and Thailand.

The large selection of items that can be purchased in online stores also encourage Indonesian consumers to do online shopping. Based on Nielsen Consumer & Media View Survey report for 2011-2015 period (in Anestia, 2015), consumers in Indonesia most often shop clothes at online stores. Nielsen mentioned that the 5 items most frequently spent by consumers in e-commerce consisted of clothing (69%), home appliance (10%), books (7%), travel tickets (7%), and computers (6%). The report also found that women are most often shop online (54%) than men (46%). Most buyers are employees / white collar (31%), students (26%) and employers (15%). In terms of age, the range of 20-29 years dominates online shoppers by 50% of the research sample. The rest are aged 30-39 years (23%), 10-19 years (18%), 40-49 years (7%), and 50 years and over (2%).

Things that encourage someone to be more happy to shop online, according to Harmandini (2011) are based on the fact that online stores have several advantages, including: (a) saving time and cost - save costs in the sense of reducing the cost of riding a vehicle or parking fee when they go to the mall, and save time because they do not have to go around the store to compare prices, just move the mouse to switch shops, (b) online stores always improve themselves - they can receive direct feedback from buyers, what can't be improved and what to become advantage can be improved. Through web analytics, an online store can find out its customer habits and optimize its services to meet customer needs, (c) regular stores do not provide search box services - without asking the salesperson, online stores through search boxes can distinguish items in their respective categories. The customer's comments will usually also be responded on message boards or e-mail, (d) regular stores do not provide recommendations - online stores such as Amazon, for example also provide recommendations on other items that may be related to the goods being searched, (e) no need to accept other distractions - in regular stores sometimes customers have to jostle, scramble things with others. In the online store this trouble is clearly not encountered.

A consumer will behave in a way to be happy to shop according to Hawkins, Mothersbaugh and Best (2007) due to external (cultural, sub-cultural, demographic, social status, reference group, family, and marketing activities) and internal influences (perceptions, memories, motives, personalities, emotions, and attitudes). The external and internal influences then shape one's self-concept and lifestyle. Self-concept and

lifestyle then generate the needs and desires for the decision-making process in buying a good.

Consumer motives for shopping can be caused by various factors. A motive is a construct that represents the invisible inner force that stimulates and generates a behavioral response and provides a specific direction for the behavior. The terms need and motivation are often used interchangeably. This is because when the consumer feels the distance between the desired state and his or her actual state, a need is recognized and experienced as a state of encouragement called motivation. Needs and motivations affect what consumers see as important and also affect their feelings and emotions (Hawkins, et al., 2007).

At a time when feelings and emotions are dominating the consumer's motive to shop so often the purchase is done without the process of thinking and without the actual needs for products or services purchased. According to research company in Indonesia, Nielsen Company (Decilya, 2011), shoppers trend in Indonesia is growing more impulsive every year. This is seen from the lack of planning buyers when you want to shop. Nielsen data show that in 2010, 21% of shoppers never planned the items they wanted to buy. This result is an increase compared to the year 2003 which is only 10%. In addition, Nielsen 2010 data shows there are 39% of shoppers planning to buy something, but there are always additional items beyond the original plan. The result also increased compared to 2003 which was only 13%. Thus, online shopping that makes it easier for someone to spend without seeing the time and place will cause the people of Indonesia to buy goods impulsively or without planning.

Mindfulness becomes an important thing for shopping activity via online, because if someone is not really aware in buying goods that he bought, then the shopping behavior becomes something that is automatic and not to meet the needs in the person. A shopping behavior that becomes automatic will lead someone to buy goods impulsively (impulsive buying). Impulsive buying are defined by Piron (1991) as: (a) something unplanned - purchases made without any known problems or buying intent formed before entering the store; (b) the result of exposure to a stimulus - occurs when a buyer sees a product for the first time and imagines a need to buy (buy an unplanned product, because there is a discount), and (c) something that is decided on the spot - the whole process of purchasing product decision is done in the place of sale and only takes a few seconds. So impulsive buying occur when the purchase is unplanned, the desire to buy is driven by the presence of unexpected stimulus, and direct purchases are made on the spot as it sees the product or stimulus that the product presents.

If a shopping behavior becomes something that happens automatically without the need for thought processes, then the person has entered the state of mindlessness. According to Rosenberg (2004) most consumer behavior is happening automatically. In general, most people are unaware of how much goods have been purchased or how they relied on consumption as a way of recreation or temporary fulfillment, this is because they did not observe their behavior or the background of their needs in buying something.

The need for temporary self-gratification in consumer behavior can also relate to one's self-esteem. Several studies have shown that high self-esteem is related to shopping.

A series of studies have found that people who feel good about themselves, especially people who see themselves competent in domains that they consider important, tend more than others to spend on a variety of products and services that can make them feel good. This affects the marketing of a whole range of products, including entertainment, alcoholic beverages, and especially beauty-enhancing products (Arnould, Price, & Zinkhan, 2004).

Low self-esteem is also associated with excessive self-concern regarded by others. Quite a lot of research shows that consumer culture, with an excessive emphasis on the beauty of the physical self, can lead to a lower self-esteem among consumers. Very low self-esteem is also associated with compulsive and addictive behaviors, such as eating disorders, compulsive gambling, television addiction, shoplifting, and compulsive shopping. In a series of focus group interviews on skin care performed on women's groups with the same demographic profile, it was found that women with low self-esteem tend to avoid buying certain products because they do not feel that it is worth spending money on themselves. Therefore, low self-esteem can sometimes lead to excessive consumption and sometimes to low consumption, depending on other individual characteristics (Arnould et al., 2004).

Lack of mindfulness about every behavior performed and the influence of self-esteem in a person so that finding a way for temporary fulfillment, can be the background of someone making impulsive purchases via online or shopping online. The research question in this study: (1) is there a correlation between mindfulness and impulsive buying among adolescent girls who do online shopping? (2) Is there a correlation between self-esteem and impulsive buying among adolescent girls who do online shopping? (3) is there a correlation between mindfulness and self-esteem among adolescent girls who do online shopping?

H1: There is a correlation between mindfulness and impulsive buying among adolescent girls who do online shopping.

H2: There is a correlation between self-esteem and impulsive buying among adolescent girls who do online shopping.

H3: There is a correlation between mindfulness and self-esteem among adolescent girls who do online shopping.

Mindfulness

According to Langer (1989), mindfulness is a feeling of involvement, attachment, and the state of the active mind achieved by noticing new things. "Mindfulness is paying attention to the ongoing experience of oneself in a way that allows openness and flexibility." Mindfulness is a condition that is fully present and conscious during everyday activities that are being done "(Compton, 2005). According to Alidina (2010), mindfulness is to pay attention to something present at a certain moment of compassion, curiosity, and acceptance.

Mindfulness is the practice to pay attention, which means knowing where the individual should direct his attachment (McKenzie & Hassed, 2012). According to Didonna (2009), mindfulness is a simple way to connect with the aim of reducing adversity and transforming human beings into a better person.

Based on these theories, it can be concluded that mindfulness is an active state of mind that pays attention to new things and life experiences openly and flexibly, as well as efforts to reduce the difficulties experienced and try to make human beings a better person. Mindfulness also means a fully present consciousness of the individual to know where attentiveness and where his or her attention should be directed in every daily activity that is being performed.

To get a better idea of mindfulness, it is useful to describe the opposite, mindlessness. When a person is in a mindless state, the person's mind is unfocused, does not pay attention to what is going on around himself; In short, the person is daydreaming. This daydreaming condition is actually useful sometimes. It would be very difficult to actively process all the information that comes to you at all times of the day. When entering a state of chronic mindlessness, then someone will be in a condition of automatic pilot and respond according to custom to his world without thinking of what is done or spoken. Another aspect of mindlessness is that in such circumstances a person becomes overly dependent on overly rigid categories of experience and may impede the person's ability to respond reasonably. Based on experiments conducted by Langer (1989), sources of mindlessness are found in habits, premature cognitive commitment in existing categories, and focus on future goals rather than ongoing processes (Compton, 2005).

Self-esteem

Self-esteem is one's view of himself. That is, people not only care about how they look but also how they value the qualities they have. (Taylor, Peplau, & Sears, 2006). According to Arnould, Price, and Zinkhan (2004), Self-esteem is a subjective self-assessment developed from personal experience of success or failure, interaction with others, maturity, descent, and social learning.

According to Tesser (2000), self-esteem is a global judgment that reflects our view of the attainment and capability we possess, the value we have, the views of our bodies, the response of others to ourselves, and even, at certain times to the goods that we have. According to Heatherton and Wyland (2003), self-esteem is an attitude about oneself and deals with personal beliefs about the skills and abilities, social relationships and outcomes that a person will have in the future.

Based on these theories can be concluded that self-esteem is a subjective judgment that is owned by a person to himself. This judgment is based on the things that have occurred in the life of the person, and based on what the person has. Self-esteem also relates to how the person perceives the quality or value he or she has.

Impulsive Buying

According to Peter and Olson (2003), impulsive buying are usually fast-paced buying choices in stores with little decision-making. Impulsive buying is the tendency of consumers to buy spontaneously, without thinking at all, happening quickly, and kinetically (Rook, & Fisher, 1995). According to Solomon (2009), impulsive buying occur when a person experiences a sudden impulse that the person can't deny. According to Loudon and Bitta (1993), impulsive buying are buying behavior that is not specifically planned.

According to Verplanken and Sato (2011), impulsive buying are not just making unplanned buying. Buying may be unplanned but not impulsive, such as habitual buying, unexpected buying solving existing problems, or buying that are too unimportant to plan or think about. Buying may also be impulsive, but planned, such as shopping to find someone a gift, or using a retail store environment as a "shopping list" for example when finding ingredients for typical Italian food. Using the time or location of a shopping place as a criterion also does not provide a satisfactory definition of an impulse buying. While some products are purchased more often for a momentary boost than others, defining impulse buying based on products that have been designated impulsive products is not a viable criterion either because of an overly broad individual or cultural difference.

According to Verplanken and Sato (2011), Rook's explanation is considered to be the most comprehensive providing definition of impulsive buying. Rook (1987) defines impulsive buying as something that happens when a buyer experiences a sudden, often strong and persistent push to buy something directly. The drive to buy is hedonically complex and can stimulate emotional conflicts. Impulsive buying are also prone to occur with less attention to the consequences of purchases made.

Based on these theories can be concluded that impulsive buying are purchases made because there is a sudden impulse that can't be controlled, occur quickly, done without any planning and without any attention to the consequences of the purchase which can then stimulate the occurrence of emotional conflict.

Method

Participants

Criteria of the subjects in this study were girls between the ages of 18 to 24 years and accustomed in doing online shopping for at least once in two months. References used to say people who accustomed shopping online at least once every two months is based on research conducted by the ministry of communication and informatics (Rianto, Amsas, Umami, Laksani, & Triyono, 2013) about the portrait of online shopping in Indonesia, where most of the people online shopping frequency is at least once in two months. Based on the results of data collection, 401 participants willing to be subjects in this study. The question of how often the online shopping behavior becomes the control data for the subject selection process. The frequency of the subjects performing online shopping in this study is differentiated into: (a) several times a week, (b) once per week, (c) once every one or two months, (d) twice a year, and (e) very rarely, once or less. Based on the selection process, the subjects of research who can enter the category accustomed in doing online shopping at least once every two months amounted to 228 participant.

Table 1. Frequency Description Results of Online Shopping Habits

Habits	Frequency	Percentage
Several times a week	23	5.7
Once per week	17	4.2
Once every one or two months	188	46.9
Twice a year	68	17.0
Very rarely, once or less	105	26.2
Total	401	100

Table 2. Age of Participant Who Pass the Selection Control Process

Age	N
18	39
19	70
20	62
21	33
22	14
23	10
Total	228

Procedure of Data Gathering

Firstly, the questionnaire was set by researchers with 110 items, which was used to assess impulsive buying, self-esteem, and mindfulness. Impulsive buying uses 20 items, respectively 10 items for cognitive subscale and 10 items for affective subscale. Self-esteem uses 20 items, respectively 10 items for negative subscale and 10 items for positive subscale. Mindfulness uses 70 items, respectively 7 items for 'non-reactivity to inner experience' subscale, 16 items for 'observing' subscale, 27 items for 'acting with awareness' subscale, 10 items for 'describing' subscale, and 10 items for 'non-judging' subscale. By the time they filled in the questionnaire, participants had been asked their willingness to fill in the demographic data, such as name, age, education level, occupation, family income, city of residence, the type of product purchased, the type of online store used, payment method and frequency of online shopping. Data were gathered from 7 January until 26 April, 2014. Data were gathered by personally approaching participants, and entrusting the questionnaires to researcher's friends. Researchers also spread the questionnaire online by making advance online form through google.doc which then disseminated through some social media.

Measurements

In this study, there are three questionnaires used to measure mindfulness, self-esteem, and impulsive buying, respectively: (a) FFMQ (Five Facet Mindfulness Questionnaires) belonging to Ruth A. Baer, Gregory T. Smith, Jaclyn Hopkins, Jennifer Krietemeyer, and Leslie Toney, which have been adapted into Indonesian by P. Tommy Yudha S. Suyasa; (b) Rosenberg Self-Esteem Scale-Revised (RSES-R) Negative & Positive Version (RSES-R) belonging to Ellen Greenberger, Chuanseng Chen, Julia Dmitrieva, & Susan P. Farrugia, which have been adapted into Indonesian by Alexy, and (c) Impulse Buying Tendency Scale (IBTS) belonging to Astrid Gisela Herabadi.

Mindfulness which was used in the questionnaire belonging to Baer, Smith, Hopkins, Krietemeyer and Toney (2006) is a 5 point Likert scale and divided into 5 facets: (a) 'non-reactivity', (b) 'observing', (c) 'acting with awareness', (d) 'describing', (e) 'non-judging'. In the 'non-reactivity' facet, the intention is to allow the mind or feeling that is being experienced to come and walk away without being carried away by the thoughts or feelings that are being experienced. In the 'observing' facet, the intention is to observe, realize or pay attention to all internal and external phenomena that occur. In 'acting with awareness' facet means being fully engaged and focused on what is being done and focusing on just one thing at a time. In the 'describing' facet, the intention is to provide an overview of what is observed without giving a label or a particular meaning to the things observed. In the 'non-judging' facet, the intention is to accept without judging the experience being felt in the present.

Based on the tests that have been done by researchers, it is known the FFMQ cronbach's alpha of 228 subjects in this study for each facets namely: (1) 'non-reactivity' = 0.855, (2) 'observing' = 0.822, (3) 'acting with awareness' = 0.912, (4) 'describing' = 0.854, (5) 'non-judging' = 0.832. So it can be concluded that all five facets of scale show good internal consistency. To get the score of mindfulness, mean of the five facets are combined and divided by five to get the composite score of mindfulness.

Self-esteem which was used in the questionnaires belonging to Greenberger, Chen, Dmitrieva, and Farugia (2003) is a 6 point Likert scale and measured 2 dimension: (a) positive self-esteem for RSES-R positive version, and (b) negative self-esteem for RSES-R negative version. Positive self-esteem means a positive assessment of the quality of one self or satisfaction with self-quality. Negative self-esteem means a negative assessment of the quality of one self or dissatisfaction with self-quality. Based on the tests that have been done by researchers, it is known the RSES-R Cronbach's Alpha of 228 subjects in this study for each versions, namely: (1) negative version: 0.869, and (2) positive version: 0.892. So it can be concluded that the scale show good internal consistency. To get the score of self-esteem, all item of negative version must be reverse coded first so all the item will resemble the positive version for scoring. After the reverse coding of negative version, then the mean of negative and positive version is combined and divided by two to get the composite score of self-esteem.

The impulsive buying used in Herabadi's (2003) questionnaire is a 7 point Likert scale and divided into two dimensions: (a) cognitive, and (b) affective. The cognitive dimension means the tendency to lack effort, thought, and planning before buying a product. The affective dimension means intimacy and passion, the desire to buy and the difficulty of controlling the desire. Based on the tests that have been done by researchers, it is known the IBTS of 228 subjects in this study have a correlation between affective and cognitive items when averaged at 0.441, $p < 0.01$ (with cronbach alpha respectively for cognitive items and affective items of 0.841 and 0.738). So it can be concluded that the scale show good internal consistency. To get the score of impulsive buying, mean of the cognitive and affective subscale are combined and divided by two to get the composite score of impulsive buying.

Table 3. Nonparametric Test Result of Self-Esteem, Mindfulness, and Impulsive Buying Using One Sample Kolmogorov-Smirnov Test

	N	Mean	Std. Deviation	Asymp Sig. (2-tailed)
Self-Esteem	228	4.7020	0.68104	0.000
Mindfulness	228	2.9594	0.28903	0.200
Impulsive Buying	228	3.8884	0.96790	0.200

Table 4. Nonparametric Test Result of Mindfulness Facets Using One Sample Kolmogorov-Smirnov Test

	N	Mean	Std. Deviation	Asymp Sig. (2-tailed)
Non-reactivity	228	2.9756	0.64311	0.024
Observing	228	3.2757	0.48855	0.080
Act Aware	228	2.8577	0.53447	0.200
Describing	228	3.4172	0.56647	0.000
Non-judging	228	2.2711	0.50202	0.000

Table 5. Correlation Results of Mindfulness and Impulsive Buying Pearson Correlations

	Impulsive Buying	
Mindfulness	R	-.236**
	Sig. (2-tailed)	.000
	N	228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 6. Correlation Results of Self-Esteem and Impulsive Buying Spearman's rho Correlations

	Impulsive Buying	
Self-Esteem	R	-.043
	Sig. (2-tailed)	.522
	N	228

Table 7. Correlation Results of Mindfulness and Self-Esteem Spearman's rho Correlations

	Self-Esteem	
Mindfulness	R	.520**
	Sig. (2-tailed)	.000
	N	228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8. Correlation Results of Mindfulness Facets and Self-Esteem Spearman's Rho Correlations

		Non-reactivity	Observing	Act aware	Describing	Non-judging
Self-Esteem	R	.312**	.183**	.408*	.408**	.045
	Sig. (2-tailed)	.000	.000	.000	.000	.498
	N	228	228	.228	.228	.228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 9. Correlation Results of Mindfulness Facets (Observing and Acting with Awareness) and Impulsive Buying
Pearson Correlations

		Observing	Acting with Awareness
Impulsive Buying	R	-.016	-.325**
	Sig. (2-tailed)	.810	.000
	N	228	228

** . Correlation is significant at the 0.01 level (2-tailed).

Table 10. Correlation Results of Mindfulness Facets (Non-reactivity, Describing, and Non-judging) and Impulsive Buying
Spearman's Rho Correlations

		Non-reactivity	Describing	Non-judging
Impulsive Buying	R	-.149*	-.049	-.074
	Sig. (2-tailed)	.024	.462	.265
	N	228	.228	.228

*. Correlation is significant at the 0.05 level (2-tailed).

Result

The nonparametric test results showed that the self-esteem composite score is not normally distributed ($p = 0.000 < 0.05$) so the correlation analysis used in finding correlation of self-esteem with impulsive buying and mindfulness is using spearman correlation. On the other hand, mindfulness and impulsive buying composite score is normally distributed ($p = 0.200 > 0.05$) so both can used Pearson correlation to find out the correlation results. The correlation analysis showed that there is a negative significant correlation between mindfulness and impulsive buying ($p = 0.00 < 0.05$, $R = -0.236^{**}$). This results showed that the higher the mindfulness the lower the impulsive buying experienced by adolescent girls who do online shopping.

The correlation analysis showed that there is no negative significant correlation between self-esteem and impulsive buying ($p = 0.522 > 0.05$, $R = -0.043$). This result showed that there is no certainty that a high self-esteem will be followed by a low impulsive buying experienced by adolescent girls who do online shopping. Other correlation analysis showed that there is a positive significant correlation between mindfulness and self-esteem ($p = 0.00 < 0.05$, $R = 0.520^{**}$). This result showed that the higher the mindfulness the higher the self-esteem experienced by adolescent girls who do online shopping.

The correlation analysis showed that there are four facets of mindfulness which have positive significant correlation with self-esteem ($p = 0.00 < 0.05$) and these four facets are 'non-reactivity', 'observing', 'acting with awareness', and 'describing'. Among the four facets of mindfulness, 'acting with awareness' and 'describing' have the highest coefficient correlation ($R = 0.408^{**}$), followed by 'non-reactivity' ($R = 0.312^{**}$) and 'observing' ($R = 0.183^{**}$). This result showed that the more adolescent girls fully focused on what is being done ('acting with awareness') and observing without giving a label or particular meaning to the things observed ('describing') will contribute to more positive self-esteem while they do online shopping. Furthermore, the more adolescent girls able to not being carried away by the thoughts or feelings that are being experienced ('non-reactivity') and only just observe all the phenomena

that occur ('observing') will also contribute to more positive self-esteem while they do online shopping.

The correlation analysis showed that there are two facets of mindfulness which have negative significant correlation with impulsive buying ($p = 0.00 < 0.05$; $p = 0.024 < 0.05$) and these two facets are 'acting with awareness' and 'non-reactivity'. Among the two facets of mindfulness, 'acting with awareness' have higher coefficient correlation ($R = -0.325^{**}$) than 'non-reactivity' ($R = -0.149^*$). This result showed that the more adolescent girls fully focused on what is being done ('acting with awareness') and not being carried away by the thoughts or feelings that are being experienced ('non-reactivity') will contribute to less impulsive buying while they do online shopping.

Discussion

In this study the relationship found in mindfulness and impulsive buying in adolescent girls who do shopping online demonstrate the role of mindfulness in the process of making a decision to buy an item. Mindfulness itself is actually a condition or state of mind that is fully conscious of what is being done and seeks to realize about things that happen both inside and outside, while impulsive buying are an act of purchase that is done because of a lack of self-awareness about the decisions that taken when buying an item. As Rosenberg (2004) suggests impulsive buying takes advantage of mindlessness or unconscious processes that can lead to impulsive purchases. The large selection of items in the online store to make teenage girls who are basically still in the stage of identity searching to try various things. When finding items in an online store that are deemed to fit a teenager's self-identity such as bags, shoes, clothes that are considered feminine and attractive, at that moment there may be a momentary impulse or impulse to buy the item.

Limitations of online stores that only show the goods through pictures alone without being able to touch the items you want to buy, further increase the possibility of someone to fall in mindlessness condition at the time of buying goods. Unlike the ordinary stores that can still show the physical direct goods to buy will make someone to think more or consider the quality of goods to be purchased and see again whether the price of goods in accordance with the quality of goods that have been touched and viewed directly. Although online stores do not provide physical goods directly, but sometimes online stores offer many special offers and also lower prices, and this is what sometimes makes teenage girls likely to buy without consideration and full awareness and only interested in buying for a moment's view.

On the other hand, there is no relationship found in self-esteem and impulsive buying in adolescent girls who do shopping online and this result is not what to be expected. According to Arnould, Price, and Zinkhan (2004), very low self-esteem is associated with compulsive and addictive behaviors, such as eating disorders, compulsive gambling, television addiction, shoplifting, and compulsive shopping. Verplanken and Sato (2011) said that impulsive buying has been associated with joy and pleasure but has also been found related to negative emotions and low self-esteem. So from previous research and past theory it is assumed that self-esteem should have a relationship with impulsive buying, but the different outcome is obtained in this study.

Researcher assumed that maybe excessive consumption like compulsive buying is more apparent in online shopping than impulsive buying.

According to previous study (Flight & Scherle, 2013), there was evidence found that compulsive buying tendency is positively associated with online shopping, while impulse buying tendency is positively associated with offline shopping. With that result study in mind, there might be possibility that self-esteem will have more relationship with compulsive buying than impulsive buying when the context is online shopping. While this assumption is still not final, in this study the level of impulsive buying tendency itself is not so high because the impulsive buying score of empirical mean is lower than its hypothetical mean of 7 point Likert scale ($\bar{X} = 3.8884 < 4$). So the participant in this study which consist of adolescent girls are not quite impulsive when buy goods through online shopping and self-esteem become not really related with impulsive buying in this study, because there is a possibility that compulsive buying is more likely to occur than impulsive buying.

While self-esteem is not found to have relationship with impulsive buying, the same can't be said with mindfulness. Mindfulness and self-esteem have positive significant relationship and it shows that the more mindful adolescent girls about their activity while they shop, they tend to have more high self-esteem. This result supported the finding of previous study by Randal, Prat, and Bucci (2015) which found that dispositional mindfulness is positively associated with self-esteem. Pepping, Davis and Donovan (2016) also found that individuals high in dispositional mindfulness tend to be high in self-esteem, and that mindfulness-based clinical interventions may assist in cultivating secure self-esteem. Regarding which specific of mindfulness can enhance self-esteem, results by Pepping, Donovan, and Davis (2013) indicate that the 'non-judging' facet of mindfulness most strongly related to high self-esteem, further 'non-reactivity', 'acting with awareness' and 'describing' were also associated with high self-esteem. However in this study, the 'non-judging' facet is not related at all to self-esteem, while the other four facets all have positive significant correlation. So from this study, it appears that in context of online shopping, the mindfulness facets of 'acting with awareness' and 'describing' is the most strongly related to high self-esteem.

Conclusion

Based on the results of data analysis, it can be concluded that there is a correlation between mindfulness and impulsive buying among adolescent girls who do online shopping (H1 accepted). In this regards, the facets of mindfulness which related to impulsive buying are 'acting with awareness' and 'non-reactivity'. From other results of data analysis, it can be concluded that there is no correlation between self-esteem and impulsive buying among adolescent girls who do online shopping (H2 rejected). For the last results of data analysis, it can be concluded that there is a correlation between mindfulness and self-esteem among adolescent girls who do online shopping (H3 accepted). In this regards, the facets of mindfulness which related to self-esteem are 'acting with awareness', 'describing', 'non-reactivity', and 'observing'.

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Critical Thinking Skills: Definitions, Assessments, and Teaching Practices

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Abstract

This paper provides a better understanding of CT skills: focusing on the ways in which CT has been defined, on the ways in which teachers can foster CT in their students through teaching and assessment practices for CT, and on connections between CT and creativity. The main part of the paper consists of four major sections: (1) defining CT skills (CT is generally a self-regulated process of reasoning that is defined as an individual making a judgment of conclusions on a special purpose); (2) teaching and assessing CT skills (creative ways of thinking, as well as CT skills, are “teachable,” though many view these skills as intuitive); (3) findings from CT research studies (in the 21st century, the new and emerging technologies have changed learning from restrictive to flexible, accessible, and innovative approaches; and problem-based learning is a learner-centered, contextualized approach); and (4) creativity and CT skills (creative thinking can be defined as the entire set of cognitive activities, and creative thinking is generally correlated with CT and with problem solving). As a final point, enhancing CT skills promotes the learning process, especially the cognitive processes of learning, and promotes teaching students how to think rather than what to think, as well. Equipped with the information from this presentation, educators can apply instruction in CT skills to their institution’s missions as a whole; and provide a more transformative educational experience for their students.

Keywords: Critical thinking, creativity, 21st century skills, the 4Cs, undergraduate education

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Introduction

“Employers, educational policymakers, and others are calling on schools and colleges to develop the 21st century skills, such as teamwork, problem-solving, and self-management, that are seen as valuable for success in the workplace, citizenship, and family life” (Hilton, 2015, p. 63). “Educators have long been aware of the importance of critical thinking skills as an outcome of student learning” (Lai, 2011, p. 4): “More recently, the Partnership for 21st Century Skills has identified critical thinking as one of several learning and innovation skills necessary to prepare students for post-secondary education and the workforce” (p. 4). The Partnership for 21st Century Skills—a nonprofit association of education and business leaders based in Washington, D.C.—was founded in 2001 to serve as a catalyst in the 21st century education movement.

California is one of the 19 States that are working together with the Partnership for 21st Century Skills. The Framework of the Partnership for 21st Century Skills describes the skills, knowledge, and expertise that students must master to succeed in life and work: it is a blend of content knowledge specific skills, expertise, and literacies (California Department of Education, 2016). In 1980, the 19-campus California State University instituted a graduation requirement in critical thinking intended to achieve the following goal (Paul, 1984): “An understanding of the relationship of language to logic, leading to the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief” (p. 5).

As the United States move toward a technology-based economy facing worldwide competition, employers demand their workers who can think flexibly, critically, and analytically, integrating information from a variety of sources and perspectives (Reed, 1998). Therefore, “A key employability skill that is widely acknowledged as important for all sectors of education is the ability for students to think critically. The analysis of knowledge requires critical thinking, which in turn involves processing the meaning and significance of observed experiences or expressed inferences” (Nilson, Fetherston, McMurray, & Fetherston, 2013, p. 1).

“The term ‘critical thinking’ is used quite commonly, but how many people (including teachers) can articulate a reasonable conception of critical thinking or detail how they use it in any part of their lives?” (Elder, 2017, p. 42). “Despite widespread recognition of its importance, there is a notable lack of consensus regarding the definition of critical thinking” (Lai, 2011, p. 4). It is true that the concept of critical thinking, like the concept of education, has been defined in different ways by different individuals (Sunday, 2012). Further, “When linked to cooperative behaviors and attitudes, critical thinking becomes even more complex to define and to operationalize” (Daniel et al., 2003–2004, p. 3). To address challenges in teaching critical thinking, it is useful to know the following: “As far as cognitive psychologists are concerned, critical thinking doesn’t come easily for anyone. Studies continue to illuminate the fact that, indeed, very little critical thinking instruction is occurring at any level in any educational institutions in any countries to any significant degree” (Elder, 2017, p. 42).

This literature review therefore seeks to achieve a better understanding of critical thinking skills: focusing on the ways in which critical thinking has been defined by educators, on the ways in which teachers can foster critical thinking in their students through effective teaching and assessment practices for critical thinking, and on connections between critical thinking and creativity, from a variety of perspectives on the nature of critical thinking. Equipped with this information, faculty can apply instruction in critical thinking skills to their institution's missions as a whole; and provide a more transformative educational experience for their students.

The Current Literature on Critical Thinking Education

Defining Critical Thinking

Pointing out that critical thinking is generally not encouraged in elementary and secondary schools but it becomes a central responsibility for higher education, Kurfiss (1988) identifies three perspectives dominating literature on critical thinking for college students: (1) *argument skills* (to detect and avoid fallacious reasoning and to analyze deductive and inductive arguments); (2) *cognitive processes* (for the organization of knowledge in memory and its role in tasks such as reading, writing, and problem solving); and (3) *intellectual development* (for the mature epistemology of commitment, not isolated analytical skills, that is recognized as the true aim of instruction for critical thinking). "Problem solving skills can be considered as one of the key skills that individuals need to acquire for attaining achievement in their personal, social, and working life" (Akinoğlu & Karsantik, 2016, p. 62). The vital role of higher education is "to develop greater reasoning skills in order to cope with and make decisions about life and society, then critical thinking plays a central position, since reasoning is impossible without critical thinking" (Kurfiss, 1988, p. xv) and "the importance critical thinking plays in the education process depends upon one's philosophic belief in the purpose of education" (p. xv).

Florence (2014), on the other hand, defines critical thinking as a combination of reflective thinking, and engaging in activities with reflective skepticism, using logic, dialogical reasoning, and assessment of criteria: "as the ability of one to reasonably and reflectively interpret, analyze, infer, and evaluate a situation in order to respond" (p. 353). As noted by Florence, the critical thinking movement in contemporary higher education may seem new; however, "Socrates's observation that the unexamined life is not worth living, expressed time-honored concerns about questioning one's assumptions: concerns comparable to the current focus on critical thinking and "the assumptions that propel the actions and words of a person" (p. 353).

Given that philosophy is thinking, "probably no discipline has more to do with thinking than does the discipline of philosophy" (Beyer, 1990, p. 55). Socrates, one of the founders of Western philosophy, argued "for the advancement of human rationality through newly developing conceptual tools. The people and the intellectual world did not embrace criticality, nor even see the need for it, on any broad scale. The same is true today" (Elder, 2017, p. 42).

As described by Moore (2013), “In contemporary debates about the nature of higher education, a concept that looms particularly large is the idea of critical thinking” (p. 506); however, “While there is broad agreement about the importance of critical thinking as an educational ideal, a view often expressed in the literature is that academics are not always so clear about what the concept means, and also not so certain about how the idea is best conveyed to students in their studies” (p. 56). Based on ideas about critical thinking from academics in the three disciplines in Moore’s study (history, philosophy, and cultural studies), Moore categorized seven definitional strands in informants’ comments: critical thinking (1) as judgment (“Being critical, it’s about taking a stand. You have to commit as a critic,” p. 510); (2) as a skeptical and provisional view of knowledge; (3) as original thinking (“A critical thinker has to argue on the basis of the critical thought,” p. 513); (4) as a careful and sensitive reading of text; (5) as rationality (“There is a sense that to some extent all intellectual work is engagement with a rational project,” p. 516); (6) as adopting an ethical and activist stance; and (7) as self-reflexivity (“Knowledge of whatever is a much more fraught process than we might initially think,” p. 518). And this multiplicity of meanings has perhaps important implications for higher education.

Critical thinking “is a self-regulated process of reasoning that is defined as an individual making a judgment of conclusions by questioning, affirmation, approval and correction in the process of cognitive activities focused on a special purpose” (Demirtas & Arslan, 2016, p. 277). Specially, “In this process, the individual makes a decision based on logical criteria conceptually and methodologically in demonstrating evidence through interpretation, analysis, evaluation, and inference. It is a powerful resource that people can use in education, private, and everyday life” (p. 277). “In the strong sense, critical thinking skills are understood as a set of integrated macro-logical skills ultimately intrinsic to the character of the person and to insight into one’s own cognitive and affective processes” (Paul, 1984, p. 5).

Teaching and Assessing Critical Thinking

“Information technology is so pervasive that education as we know it has changed considerably. With renewed vigor, educators all over the world are grappling with the immense learning challenges and myriad opportunities that come with life in the 21st century” (Hernandez, 2017, ¶1) and “At the higher-education level, the quest for relevance is deeply pronounced. Innovation and development in the workplace have outpaced the efforts of universities to develop courses that can prepare their learners for the competency demands of jobs and careers that have yet to be created” (¶2). Hernandez further states that acquiring the 3Rs (*reading, writing, and arithmetic* that are the foundations of a skill) has no longer been enough since the late 1900s, and the essential skills for success in today’s world, especially college and career readiness and global citizenship, include the following learning and innovation skills (recognized as the 4Cs: *critical thinking, communication, collaboration, and creativity*).

Certainly, it is so that “The 21st century is a new era, where we learn in new ways, create new things, and depend on each other for new partnerships. . . The 21st century university must become something new” (Rao, 2016, p. 109). Accordingly, as emphasized by Weissberg (2011), “American universities have a responsibility to teach more than what the course syllabus demands” (p. 222). This statement offers support to Hetland’s (2013) argument below:

Schools often seem to default to a vision of education as knowledge acquisition, which the fervor for testing has only exacerbated; students “succeed” when they can reproduce knowledge on demand from memory. No one should belittle the importance of knowledge—it’s an essential component of wisdom and raw material for constructing what society needs and values. But if education focuses primarily on knowledge acquisition, students are unlikely to learn to behave as democratic citizens must—that is, as active, informed, ethical participants in shaping our collective futures. (p. 67)

As emphasized by Suarez-Orozco and Sattin (2007), “Information, communication, and media technologies are the high-octane fuel that drives global interdependence, as people across the world connect with one another instantaneously. These communication networks and the digitization of data have another global effect with deep consequences for formal education” (p. 60) and, at the same time, “... advanced technological skills are no longer optional for students in the 21st century. Schools must embed technology across the curriculum and view mastery of technology alongside literacy and numeracy as skills required of all graduates” (p. 62).

Perhaps future employment might be the most quantifiable goal of education in general (Keane, 2016), and so, “If we cannot encourage innovative and creative ways of thinking, or train our children to revisit forgotten ones, all the technology training in the world is just so much tilting at windmills” (p. 12). Creative ways of thinking, as well as critical thinking skills, are “teachable,” though many view these skills as intuitive (Newbill & Baum, 2012–2013): “Using technology such as the internet, webcams, speakers, computers, smartphones, Wii Fit boards, and projectors, students and teachers built their own critical- and creative thinking skills” (p. 19).

Ritchhart and Perkins (2008) offer six principles which anchor Visible Thinking and characterize instructional approaches: (1) learning is a consequence of thinking; (2) good thinking is not only a matter of skills but also a matter of dispositions; (3) the development of thinking is a social endeavor; (4) fostering thinking requires making thinking visible; (5) classroom culture sets the tone for learning and shapes what is learned; and (6) schools must be cultures of thinking for teachers. Visible Thinking focuses on such core practices as thinking routines, the documentation of student thinking, and reflective professional practice (Rodwan & El-Ashri, 2012): Visible Thinking “was originally developed at Lemshaga Akademi in Sweden as part of the Innovating with Intelligence project and focused on developing students’ thinking dispositions in such areas as truth-seeking, understanding, fairness, and imagination” (p. 15).

“Schools and colleges need to enable people to be more critical in their thinking, precisely by preparing them to be more skeptical towards commonly accepted truisms and by situating what is presented as knowledge in its necessarily relational and moral contexts” (Lim, 2015, p. 18). Emphasizing that “virtually everyone would agree that a primary, yet insufficiently met, goal of schooling is to enable students to think critically” (p. 8), Willingham (2007) argues that although there is no one set of critical thinking skills that can be acquired and deployed regardless of context, there are metacognitive strategies that make critical thinking more likely, and the ability to think critically depends on domain knowledge and practice.

“To promote thinking in children, teachers must themselves be intentional in their practices and diligent about evaluating their effectiveness. It helps to plan and reflect with another person who is familiar with the students and classroom schedule” (Epstein, 2008, p. 40): therefore, “many prekindergarten programs use a team-teaching model, which not only benefits the students, but also contributes to the professional development of thinking practitioners. Team planning is most effective when teachers share objective anecdotal notes about children” (p. 40).

The emphasis on performance in dance education, for instance, “often leaves little room for thorough and critical consideration of other aspects of dance as an academic discipline” (Amin, 2016, p. 15): in pathways to critical pedagogy in dance education, “Critical pedagogy views teaching and learning as a conversation among teachers and students, using the knowledge students enter the classroom with as an intentional pathway to learning new concepts” (p. 24).

“The idea of ‘teaching it directly’ suggests that the best approach to helping students develop critical thinking is through explicit instruction—not as a standalone endeavor, but within respective fields of knowledge” (Goodwin, 2017, p. 81). “What may be more useful is to explicitly introduce students to the language of logic and reason, providing them with an approach to analyze their own and others’ thinking” (Goodwin, 2014, p. 80). Ideally, “effective thinking is a trait that is valued by schools at all levels; however, it is a skill that is very rarely taught. Teaching thinking skills explicitly and embedding them into a literacy curriculum can help students become more effective critical and creative thinkers” (Johnson, 2002, p. 3).

Findings from Critical Thinking Studies

A study by Vashe et al. (2016) identified improvements in 229 students’ uses of critical thinking in physiology. Instead of using a surface learning approach (multiple-choice questions for assessing student performance), this longitudinal study employed a hybrid approach: a variety of teaching methods that included didactic lecture classes, self-directed learning, and problem-based learning. As a result, the researchers observed a significant increase in critical thinking by the completion of the course, as compared with their performance on the pre-test.

“Traditionally, learning took place when instructors and students were in the classroom at the same time. . . . In the 21st century, the new and emerging electronic learning technologies (e-learning) have changed learning from restrictive to flexible, accessible, and innovative approaches” (Tseng, Gardner, & Yeh, 2016, pp. 15–16). Problem-based learning, as noted by Tseng et al., is a learner-centered, contextualized approach: “In this approach, learning begins with a problem to be solved rather than content to be mastered. Learners work on problems in ways that require them to develop expert knowledge, problem-solving proficiency, lifelong learning skills, and team participation skills” (p. 17). “Actually, it is one of the most innovative instruction methods in the history of education in which an authentic or ill structured problem is presented to students to embed them into the learning process by building new knowledge onto the previous one in order to solve the problem itself” (Birgili, 2015, p. 75).

Three currently nationally recognized and validated critical-thinking assessment instruments are as follows: the California Critical Thinking Skills Test (CCTST), the California Critical Thinking Disposition Inventory (CCTDI), and the Health Science Reasoning Test (HSRT) (Cone et al., 2016). A study by Cone et al. was to determine if HSRT results improved in second-year student pharmacists after exposure to an explicit curriculum designed to develop critical thinking skills. In the first year, students (N = 83) attended a 16-week laboratory curriculum in which simulation, formative feedback, and clinical reasoning were used as teaching strategies. Then students took the HSRT and significant improvement in HSRT scores occurred among students. Cone et al. found that the laboratory curriculum based on the following 5-phase experiential learning cycle was particularly effective in developing students’ critical thinking skills: Phase 1—the dialogue of experience, which introduced the topic to students; Phase 2—a participative simulation-based learning experience; Phase 3—processing the learning experience, in which students worked on content definitions and explanations; Phase 4—generalizing from the lessons learned, to summarize the knowledge; and Phase 5—clinical application, to personalize the experiences, and to link learning experiences to goals, with evaluations of results. Repeating the 5-phase framework ensured sustainability of the students’ developing critical thinking skills.

A study by Huang, Lindell, Jaffe, and Sullivan (2016) identified the strategies of faculty teaching critical thinking, using semi-structured interviews to answer the questions: What approaches do faculty recognized by their peers as good teachers in critical thinking use to teach critical thinking? How explicit is this teaching? A total of 291 medical and nursing faculty at eight institutions participated in the online survey. The findings were organized into themes of “what” faculty teach to learners (e.g., cognitive skills such as higher-order thinking and metacognition), “how” they teach (e.g., guiding principles of clinical relevance and perspective shifting, and concrete strategies such as questioning and group interaction), and “why” they teach critical thinking (e.g., to produce the best possible health outcomes for patients). The teaching strategies the authors recommend include: be explicit about the thinking process; use questions to probe underlying thinking; apply concepts to other settings; consider different perspectives; engage learners using writing and other media; and leverage group interaction.

Indicating that “lessons that support higher-order thinking are also likely to interest and engage students” (p. 10), Brookhard (2016) has shared three strategies for infusing higher-order thinking into lesson plans: Strategy 1 (craft open questions carefully to make sure they tap the particular content and thinking skills the instructor wants to teach); Strategy 2 (foster students’ thinking, not retelling, because a retelling task asks students merely to look up and reproduce information but without additional cognitive processing); and Strategy 3 (facilitate student Self-Assessment, because students who can self-assess are poised to be lifelong learners. They are poised to use self-regulation strategies and to be their own best coaches as they learn).

What makes a question essential? “Essential questions foster the kinds of inquiries, discussions, and reflections that help learners find meaning in their learning and achieve deeper thought and better quality in their work” (p. 11); moreover, essential questions stimulate ongoing thinking and inquiry; are arguable with multiple plausible answers; and spark discussion and debate (Wiggins & Wilbur, 2015). Hence it is important to provide questions that can stimulate discussions on essential concepts. These discussions allow students to achieve competency in the content area, and to recognize the students’ existing competencies and experience: welcoming and encouraging their participation in the discussion. “Reflective writing,” in particular, “allows students to respond to and ask important questions, to pursue arguments, to defend a point of view, to accept antagonistic views, and to weigh possible alternatives” (Tallent & Barnes, 2015, p. 439). In the same way, “Writing is not simply a vehicle that allows students to express what they know; writing is a tool that generates new thinking” (Gallagher, 2017, p. 26).

Creativity and Critical Thinking Skills

Educators typically value creativity, but rarely actively promote it. “In recent years, creativity has been valued as universal capability that it can be applied in everyday situations. It is interpreted as capability of human intelligence instead of a subject” (Birgili, 2015, p. 73). Instruction in American classrooms “has tended to skew toward teaching routine tasks that follow a step-by-step process, rather than encouraging complex and creative problem-solving” (Goodwin & Miller, 2013, p. 81). “If there is a growing need for creativity in the workplace, what can teachers do to help students become more creative? Inside the square box of the classroom, how can we help students think outside the box?” (Goodwin & Miller, 2013, p. 80).

Prominent 20th Century educational reformer, John Dewey, valued creativity and characterized ways of promoting it. Dewey’s pragmatic approach to educational thinking “contributed to the development of informal education—education that must engage with and enlarge with experience. He implied the idea that students should be trained not to accept new ideas and ideologies without critical processing and reasoning” (Hosseini, 2010, p. 230).

Creativity is not easily defined because of its unseen character (Lewis, 2005); yet “a view of creativity around which there has been a growing consensus that it is a composite concept, the product not just of individual traits, but also of societal and

environmental factors” (p. 37). Although creative thinking has traditionally been associated with the arts/humanities and critical thinking with the sciences, a brief examination of the evidence suggests the essential nature of both creative and critical thinking within each of the two cultures (Scott & Karakas, n. d.). In general, critical thinking and creative thinking include the following: idea generation, reflective judgment, self-regulation, attitudes, and dispositions (Newbill & Baum, 2012–2013).

In a few words, “creative” thinking is divergent, seeks to create something new, and involves contravening accepted principles; in contrast, “critical” thinking is convergent, seeking to assess worth or validity in something that exists, and is carried on by applying accepted principles (Beyer, cited in Baker & Rudd, 2001). Specifically, in Baker and Rudd’s words, “It does appear that the collegiate educational experience has had little effect upon the students’ ability to be creative or their disposition to think critically” (p. 182) and “Teaching students to remember factual information and return it in the form of an examination is the prevalent teaching mode employed in secondary and post-secondary institutions today” (p. 182).

Creative thinking and critical thinking are often “used interchangeably in definition. In fact, they have different constructs and individuals should approach everyday problems by using both competences (Birgili, 2015): “Creative thinking can be defined as the entire set of cognitive activities used by individuals according to a specific object, problem and condition, or a type of effort toward a particular event and the problem based on the capacity of the individuals” (p. 72). Also, creative thinking is generally correlated with critical thinking and with problem solving. To differentiate them, Birgili has recognized three unique dimensions of creative thinking: (1) *synthesizing* (which includes activities such as deriving benefit from analogous thinking; and deducing an original result from small components); (2) *articulation* (which involves expanding existing knowledge with the help of the new information); and (3) *imagination* (e.g., constructing relationships between valid and reliable thoughts; demonstrating flexibility in thought with the help of imagination). Birgile concludes that problem-based learning requires the use of experience-yielding problems that give learners ample opportunities to apply new information to existing knowledge, and to create innovative solutions.

Piske, Stoltz, Guérios, and de Freitas (2016) emphasize the mutually supporting roles of creativity and imagination: “Creativity is the quality to create, whereas the imagination can be considered as the action to imagine and invent something new,” and thus, “every human being is able to use creativity to solve problems in various ways and discover a range of possibility of solutions for the different areas of knowledge” (p. 2270).

Conclusion

The newly created Common Core State Standards reflect critical thinking as a cross-disciplinary skill vital for college and employment (Lai, 2011, p. 4). As discussed in the current paper, to succeed in the 21st century, students will need to perform to high standards and acquire mastery of rigorous core subject material (the 3Rs); they will also need to gain life and career skills, learning and innovation skills (the 4Cs), information, media and technology skills (P21, 2017). “Perhaps the biggest recent shift in how information is produced, accessed, and used is the multiplication of information formats that now exist as a result of advances in computing technology and networked systems and communities” (Witek, 2016, p. 24). “Effective use of information technology has arguably equaled skill in reading as a key to thinking about the world and has perhaps even surpassed it as a predictor of success” (Prensky, 2013, p. 23).

The following characteristics of critical thinkers illustrated by Jones and Safrit (1994) are indeed intriguing: appreciates creativity; believes life is full of possibilities; asks questions and challenges answers; associates facts with real life situations; takes risks and is not threatened by failure; accepts others’ viewpoints; is open-minded; generates and evaluates alternative choices; encourages and challenges others to be critical thinkers; and is objective. Chiefly, as described by Su, Ricci, and Mnatsakanian (2016), students with critical thinking skills can determine what information is important and what is irrelevant, identify logical errors but can be open to other points-of-view and reappraise their core values, opinions and knowledge, weigh various facts and identify logical errors, thus helping to solve problems, bring about clarity of perception, vision, and a logical communication method of explanation, and realize that one can select the correct response to any problem or decision that might arise. Accordingly, Su et al. argue that the teacher’s role is to focus on strategies that promote these capabilities.

Forrester (2008) especially emphasizes that “teachers . . . need to employ critical thinking to assess their own teaching methods and their students’ learning styles. . . . Creative and critical thinking skills involve and affect both teachers and learners” (p. 104); in this way, “Education should focus not only on core skills and knowledge but also on teaching and practicing creative and critical thinking skills, because these are the skills that will encourage lifelong learning and personal development” (p. 104). This perspective complements Roberts (2008), who argues that “thinking can be defined, taught, and assessed. More important, creative and coherent thought is an attribute of a lifelong learner. By teaching students to think, we prepare them not only for employment and citizenship, but also for leading abundant lives” (p. 36).

Most 20th century conceptions of learning characterized as teachers as experts and textbooks as primary sources; and emphasized the product. Contemporary approaches to learning characterize teachers as facilitators; a variety of resources and media as contributors; and the importance of the process. In terms of the learning process, formative assessment is essential. Formative assessment with effective feedback by teachers “supports deeper learning and development of transferable competencies,

current educational policies focus on summative assessments that measure mastery of content” (Hilton, 2017, p. 66), and so, “new approaches to teacher preparation and professional development will be needed to help current and prospective teachers understand how to support students’ deeper learning and development of 21st century competencies in the context of mastering core academic content” (p. 66).

As a final point, it is now established that developing and enhancing critical thinking skills will promote the learning process: especially the cognitive processes of learning. In particular, thinking has proven to be “a teachable and learnable skill. . . . Educational systems must focus primarily on teaching youth how to think rather than what to think” (Assaf, 2009, p. 35).

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Implementation of Positive Psychology Interventions in Improving Subjective Well Being on Individual with Physical Disability Due to Accidents

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Abstract

Every person wants to have a perfect physical state to live normally, but some people must accept the condition of being disabled in conducting their lives. Physical disability can be caused by several things, one of them is accident. An accident can change an individual life drastically and affect the person's subjective well being. PPIs (Positive Psychology Interventions) is a form of treatment than can be used to improve subjective well being (SWB). This study was conducted to see the effect of PPIs (count your blessings, using your strength, and best possible self) in increasing the SWB on individuals with physical disability due to accidents. Participants of this study were previously four people (age range of 44 - 66 years) old. However, after a psychological examination, one of the participants was unable to follow the intervention sessions due to illness and had to return home. Participants recruitment was conducted by non probability sampling technique, which is purposive sampling within research design, one group pre-post test design. The statistical analysis using SPSS showed a significant difference after th intervention, measured by satisfaction with life scale (SWLS) ($p = 0.004 < 0.05$). Conversely, no significant differences were shown when measured using positive affect and negative affect scale PANAS, with positive affect ($p = 0.12 > 0.05$) and negative affect ($p = 0.17 > 0.05$) and measured by oxford happiness questionnaire (OHQ) ($p = 0.19 > 0.05$).

Keywords: Positive Psychology Interventions, Subjective Well Being, and Physical Disability.

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Introduction

Background

Disability can be caused by numbers of things and conditions, one of them is an accident. For numbers of people, accidents can become a terrible life event; moreover when the accidents caused disability due to the loss of physical functioning. People who experience such condition may have difficulties to accept themselves for they used to be normally functioning but recently experience inability to do many things. When a person fails to accept such condition, he or she may become inferior and worthless for being unable to develop personal abilities. People who were born with physical disabilities tend to get used to live in such condition; but, they who experience drastic life changes from normal into disabled may feel being enforced to live in a more limited fashion with number of obstacles and less freedom to join social activities

Accidents that causes a person to have amputation will have a negative psychological impact on the individual. According to Senra, Oliveira, Leaf, and Vieira (2011), such individuals will experience periods of sadness and frustration especially in the process of attaining well being and especially when they feel their identity turns to be disabled and feel being dependent on others.

Individuals with physical disabilities are not widely accepted in the environment. Most people may criticize, stigmatize, and discourage them to live independently. Such condition creates psychological pressure on the individuals with physical disability. Mohsin, Saeed, and Zaidi (2013) explained in his study that family members of the individual with physical disabilities consider the physically disabled member of the family as an additional burden to the family because of the loss of additional labor, increased outcome on special care, and the need to compensate for higher facilities, and no proper infrastructure of care for individuals.

Individuals with physical disabilities will generally experience deficits in happiness and satisfaction of life. They consider themselves as a helpless person, feel inferior, and can not do much in their lives. Poor moods and insignificant feelings being experienced by people with physical disabilities indicate low satisfaction of life and low positive affects in which may affect their subjective well being state. Subjective well being refers to individuals' evaluation of their life, such as an assessment of life satisfaction, evaluation of feelings, including mood and emotion (Diener & Chan, 2011). Subjective well being is often considered a very important thing for it is closely related to positive conditions that help a person performs their functions optimally. Subjective well being is believed to make a person achieves mental health, physical health, and has better coping skills, also a longer life.

One of the most reliable intervention techniques to improve subjective well being is positive psychology interventions (PPIs). Positive Psychology (PP) can be considered as a discipline in psychology that focuses on positive experiences, positive emotions, positive personality traits, and positive social interactions (Pietrowsky & Mikutta, 2012). In a study by Sheldon and Lyumbomirsky (2006, in Pietrowsky & Mikutta, 2012) "Best Possible Self" intervention proved to enhance optimistic feelings in individuals. In another study conducted by Emmons and McCullough (2003, in

Pietrowsky & Mikutta, 2012) showed that “Count Your Blessings” intervention can enhance feelings of gratitude, life satisfaction, and optimism. Lastly, “Using Your Strength” intervention is used because it encourages individuals to do something good with their personal power thus the individuals can increase their sense of independence. Such considerations have made researchers combine the three interventions to increase subjective well being on individuals with physical disabilities due to accidents.

Problem Identification

Does the implementation of positive psychology interventions have a significant effect on improving subjective well being in individuals with physical disabilities due to accidents?

Research Purpose

This study aims to examine the effect of positive psychology interventions on improving subjective well being in individuals with physical disabilities due to accidents.

Literature Review

Physical Disability

Definition of Physical Disability

Article 1 Paragraph (1) of Law No. 4 of 1997 concerning about people with disabilities, specifically affirms that physical disability is a physical disorder which may interfere or constitute obstacles and difficulty for its persons to conduct activities as appropriately divided into three types, blind, deaf or speech impaired, and disabled.

Type of Physical Disability

According to the Law on Persons with Disabilities, Article 1 paragraph (1) of Law No. 4 of 1997, the type of physical disability can be grouped into three groups. First, the blind, is a person who is impeded by mobility of motion caused by the loss or diminution of vision function as a result of birth, accident or illness. Second, hearing or speech, is a disability as a result of the loss or disruption of hearing and/ or speech function, either caused by birth, accident or illness. Third, disability, is a defect in the limb part of the body. Disability can be defined as a state of being damaged or disturbed, as a result of disruption of shape or resistance to bone, muscle, and joint in its normal function. This condition can be caused by illness, accident or can also be caused by innate nature.

Causes of Physical Disability

According to Nugroho and Utami (2008), the types and causes of disability can be caused by various factors, such as: a) acquired defects, the cause may be due to traffic accidents, wars or armed conflicts or due to chronic diseases and b) or from birth (congenital), among other causes due to the disorder of the formation of organs

(organogenesis) during pregnancy, virus attack, malnutrition, the use of uncontrolled drugs or sexually transmitted diseases.

Subjective Well Being

Subjective Well Being Definition

Subjective well being refers to how people evaluate their lives and includes variables such as life satisfaction and marital satisfaction, lack of depression and anxiety, and positive moods and emotions (Diener, Suh, & Oishi 1997). In other words, subjective well being is a condition in which positive affects are greater than negative affects and have satisfaction in life as a whole, as in the domain of health, occupation, and independence

Subjective Well Being Components

According to Eddington and Shuman (2005), subjective well being is composed by several major components, such as the satisfaction of life globally, satisfaction with a particular life domain, positive affects (mood and pleasant emotions), and lack of negative affects (unpleasant mood and emotions). Positive affects and negative affects belong to the affective component, whereas life satisfaction belongs to the cognitive component.

Factors Affecting Subjective Well Being

According to Eddington and Shuman (2005), there are several factors that influence the subjective well being of a person, including gender differences, personality trait, marital status, health, and optimism.

Positive Psychology Interventions

Positive psychology was introduced by the president of the American Psychological Association, Martin Seligman in 1998 which is a scientific study of positive experiences and positive traits that individuals possess, as well as the things that facilitate their development (Duckworth, Steen, & Seligman, 2005). Positive psychology aims to broaden the focus of clinical psychology beyond the pain (negative things) experienced by individuals. In positive psychology, positive emotional coaching and building positive characters can help individuals alleviate suffering and release root causes (Duckworth, et al., 2005). So the treatment focuses more on how to build positive things than to reduce the negative things.

Positive emotions are more than just good feelings. Lyubomirsky, King, and Diener (2005) said that positive emotions can drive a person to successful outcomes in various domains of life, including relatively better performance, increased creativity, greater marital satisfaction, and social relationships. The benefits of positive emotions are very relevant to produce a change in one's life.

Framework of Thinking

Individuals with physical disabilities will experience much decreased function in their lives. Individuals will tend to limit their activities and withdraw from social life because they feel helpless and the existence of a negative rejection or stigma from the environment. Such conditions trigger the emergence of new problems, such as becoming more susceptible to poor mood and low life satisfaction because of feeling helpless and unable to function normally or do many activities in their life.

The impact of feeling helpless for being unable to function normally affect subjective well being on the individuals with physical disabilities. Subjective well being refers to the well-being of individuals who are viewed through two domains, such as affective (positive affects and negative affects) and cognitive (life satisfaction). Subjective well being is also often considered very important because it is closely related to positive conditions that help a person perform their functions optimally. Therefore, it is important for individuals with physical disabilities to improve their subjective well being to be able to live a more optimal life function.

Subjective well being can be improved by giving positive psychology interventions. These interventions are part of positive psychology which is a scientific study of positive experiences, positive individual traits, and potentials that facilitate their development so as to achieve both well being and optimal functioning (Duckworth, et al., 2005). In this study, the use of positive psychology interventions will focus more on improving positive feelings and self-discovery potential and life satisfaction.

If illustrated, it will form a frame of thinking will be like this.

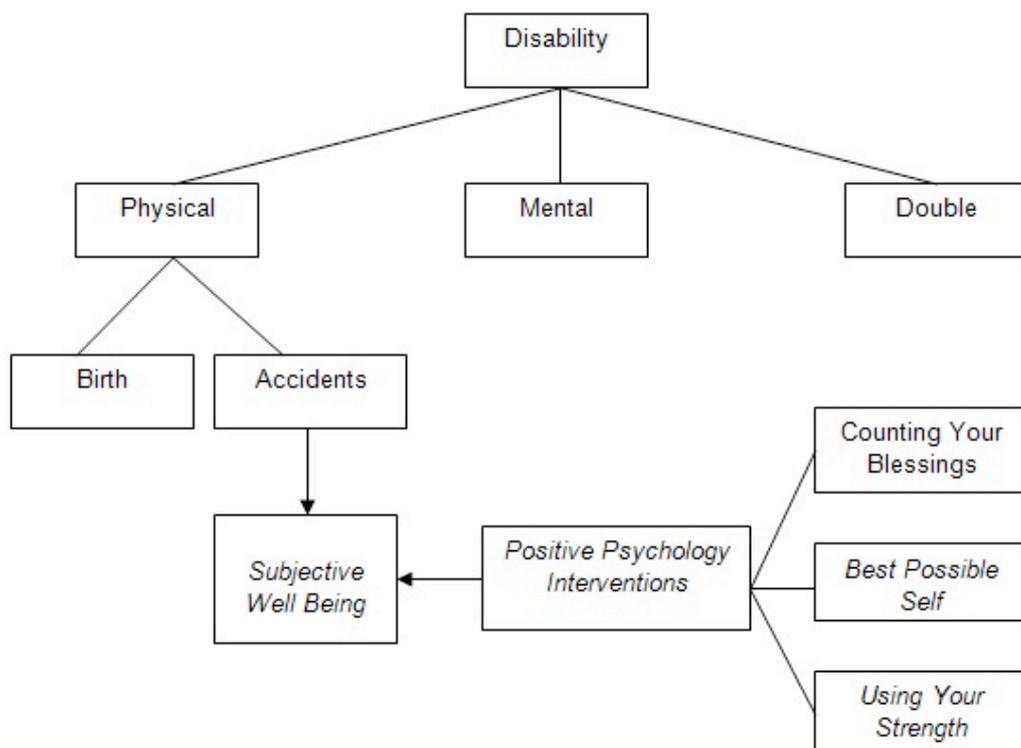


Figure 1: Framework of thinking for the influence of positive psychology interventions on subjective well being

Research Methods

Participants

Participants who are selected in this study were individuals with low subjective well being, measured using three scales, such as Positive and Negative Affect Schedule (PANAS), Satisfaction with Life Scale (SWLS), and Oxford Happiness Questionnaire (OHQ). In this study, participants should have low score characteristics on positive affects and high scores on negative affects measured by PANAS, score below 20 on SWLS, and score below 4 on OHQ.

In addition, participants must also be over 18 years of age. Last, participants also agreed to attend therapy and measurement sessions by filling out informed consent and signing a statement about their willingness to follow the entire therapy session.

Research Design

The research design used in this study is one group pre-post test design. Measurements were conducted quantitatively by giving questionnaires and qualitative measurements by making observations and interviews. In this study, the researchers made initial measurements of the subjective well being condition of the participants and the re-measurements were made after the intervention was completed as a form of manipulation.

Location Setting and Research Equipment

This study was conducted in a social home in a special room so that the intervention can be conducted well with focus and make the client feel comfortable. Equipment that will be used in this research include chairs, tables, and stationery (paper, pencil, pen, eraser, and sharpener).

Measurement

Questionnaire

Participants will be given three types of scales at the beginning before the intervention and the end after the intervention to find out the change in subjective well being condition after completion of the intervention. The three measuring tools are Satisfaction with Life Scale (SWLS), Positive Affect and Negative Affect Schedule (PANAS), and Oxford Happiness Questionnaire (OHQ).

Interview

The researcher will direct the conversation to certain matters or aspects in the participant's life or the participant's subjective experience, then the information obtained will be used as supporting material of other psychological tests result and to know the progress they make from session to session.

Observation

Observations in this study are natural so that researchers do not use standard guidelines in making observations. Observation activities were carried out at each intervention session to observe the behaviors performed by the participants.

Procedure

The screening process was conducted by giving pre-test to the participants. They were also interviewed, and they were observed during the interview session. They who met the characteristics for the participants became the prospective participants and they were asked to follow the 8 therapy sessions which consisted of Count Your Blessings, Using Your Strength, and Best Possible Self. Quantitative evaluation was conducted in this study is to see if there is a change in subjective well being of the participants. Participants also gave responses to SWLS, PANAS and OHQ. Responds before and after intervention were measured. Increased SWLS score, increase positive affects and decrease negative impact of PANAS and increased OHQ indicate improvement of subjective well being

Result and Discussion

Analysis and Intervention Results

The First Subject (BS)
Table 1 Intervention Results (BS)

No.	Scale	<i>Pre Test</i>	<i>Post Test</i>
1.	SWLS	12	21
2.	PANAS	<i>Positive Affect = 25</i> <i>Negative Affect = 36</i>	<i>Positive Affect = 40</i> <i>Negative Affect = 26</i>
3.	OHQ	3.79	3.82

Based on the results in the table above, it can be seen that measured by three different scales, BS indicates a change. On the SWLS scale, BS has increased in terms of life satisfaction from score 12 (*not satisfied, below average*) to score 21 (*quite satisfied, on average*). This indicates that after the intervention, BS has a better life satisfaction (score > 20).

The same increase was also shown by BS on the PANAS on the positive affect dimension in which BS showed an increased score from 25 to 40, whereas in the negative affect dimension, BS showed a decreased score from 36 to 26. It can indicate that after intervention, in psychological condition, BS feels more positive affects than negative affects.

On the OHQ scale, there was a change in pre test and post test scores, although very it's not significant. Both score 3.79 and score 3.82, show the same, which is *not*

particularly happy or unhappy. Individuals in this category are not very happy or not so unhappy or ordinary.

Second Subject (RS)
Table 2 Intervention Results (RS)

No.	Scale	<i>Pre Test</i>	<i>Post Test</i>
1.	SWLS	19	27
2.	PANAS	<i>Positive Affect</i> = 38 <i>Negative Affect</i> = 39	<i>Positive Affect</i> = 41 <i>Negative Affect</i> = 37
3.	OHQ	3.13	3.96

Based on the results in the table above, it can be seen that measured by three different scales, RS showed a change. On the SWLS scale, RS has increased in terms of life satisfaction from score 19 (*slightly dissatisfied, less than average*) to a score of 27 (*very satisfied, above average*). This indicates that after the intervention, RS has a better life satisfaction (score > 20).

The increase is also shown by RS on the PANAS on the positive affect dimension and decrease in the negative affect dimension, although the changes shown are not too large. RS has changed the score from 38 to 41 on the dimensions of positive affect and changes from score 39 to 37 on the dimensions of negative affect. Although the changes shown are insignificant, it can reasonably indicate that after intervention, RS has more positive affects than negative affects.

On the OHQ scale, there is a change in pre test and post test scores, from score 3.13 to 3.96 where both fall into the category of *not particularly happy or unhappy*. Individuals in this category are not very happy or not so unhappy or ordinary.

Third Subject (WM)
Table 3 Intervention Results (WM)

No.	Scale	<i>Pre Test</i>	<i>Post Test</i>
1.	SWLS	18	28
2.	PANAS	<i>Positive Affect</i> = 24 <i>Negative Affect</i> = 32	<i>Positive Affect</i> = 42 <i>Negative Affect</i> = 13
3.	OHQ	3.75	5.13

Based on the results in the table above, it can be seen that measured by three different scales, WM shows a significant change. On the SWLS scale, WM experienced an increase in life satisfaction from a score of 18 (*slightly dissatisfied, less than average*) to a score of 28 (*very satisfied, above average*). This indicates that after intervention, WM has a better life satisfaction (score > 20).

Significant changes were also shown by RS on PANAS. In the positive affect dimension, WM shows an increase in score, from 24 to 42, whereas in the negative affect dimension, WM shows a decrease, from score 32 to 13. Increase in positive affect and decrease in negative affect, indicating that WM feels more happy after being given intervention.

On the OHQ scale, WM showed a significant change between the pre test and post test scores from the score of 3.75 to 5.13. Score 3.75 goes into the category *not particularly happy or unhappy*. Individuals in this category are not very happy or not so unhappy or just plain, while score 5.13 goes into the category of *very happy*, where individuals in this category are very happy.

If concluded, then the improvement experienced by the three subjects after completion of the intervention based on the difference of pre test and post test results are as follows:

No	Subyek	Skala (Pre Test)			Skala (Post Test)		
		SWLS	PANAS	OHQ	SWLS	PANAS	OHQ
1.	BS	12	<i>Positive Affect = 25</i> <i>Negative Affect = 36</i>	3.79	21	<i>Positive Affect = 40</i> <i>Negative Affect = 26</i>	3.82
2.	RS	19	<i>Positive Affect = 38</i> <i>Negative Affect = 39</i>	3.13	27	<i>Positive Affect = 41</i> <i>Negative Affect = 37</i>	3.96
3.	WM	18	<i>Positive Affect = 24</i> <i>Negative Affect = 32</i>	3.75	28	<i>Positive Affect = 42</i> <i>Negative Affect = 13</i>	5.13

Conclusion

Results on the three participants (BS, RS, & WM) indicates improvement in the aspect of life satisfaction and positive affect, and decrease in the negative affect aspect. Thus positive psychology interventions can improve subjective well being, especially happiness, optimism, hope, independence, and life satisfaction. In the first intervention, the Count Your Blessings, the three participants are now able to appreciate the little things that happen in their daily life. In addition, they also begin to realize the positive things that are around that make them feel happy and cared for.

In the second intervention, Using Your Strength, the three participants said that now they know what ability they have. So they could realize that behind the physical disabilities, they still have some personal qualities that can be used for something useful. The three participants are also able to use their personal qualities or personal strength in real life so that they feel more meaningful because it can be useful for others. In addition, they also feel proud and confident to socialize and join a larger social environment because of their strenght or something good inside them.

In the third intervention, the Best Possible Self, the three participants were able to visualize their life in the future. They are also quite capable of making steps to achieve their desires in the future. So it increases expectations and makes them feel more optimistic to make it happen.

Discussion

Based on research conducted by Pietrowsky and Mikutta (2012), positive psychology interventions proved to increase subjective well being in individuals. Measured by using satisfaction with life scale (SWLS) by comparing the results of pre test and post test, in this study, the results of different statistical test showed significant differences ($p = 0.004 < 0.05$). The statistical analysis also showed that the average post test is higher than the average pre test ($t = -15.588$) with a mean increase from 16.33 to 25.33. This means that all three subjects experienced a significant improvement in the life satisfaction aspect.

Different from life satisfaction aspect, positive affects ($p = 0.12 > 0.05$) and negative affect ($p = 0.17 > 0.05$) did not show significant difference as measured by positive affect and negative affect scale. Nevertheless, the increase in positive affect is indicated by the three subjects with a value of $t = -2.169$, where the minus sign indicates that the post test score is higher than the pre test result with a mean increase from 29.00 to 41.00. The progress experienced by the three subjects was also marked by a decrease in negative affect with a value of $t = 2.104$, where a positive sign indicates that the post test score is lower than the pretest result with a mean decrease from 35.67 to 25.33. In addition, statistical analysis results also did not show significant differences measured using oxford happiness questionnaire (OHQ) ($p = 0.19 > 0.05$). Nevertheless, an improvement in the aspect of happiness is indicated by the three subjects with a value of $t = -1.905$, where the minus sign indicates that the post test score is higher than the pre test result with a mean increase of 3.55 to 4.30.

A significant difference in the life satisfaction aspect is related to the attitude of the three subjects who have begun to accept their physical limitations and to be grateful for the things that are happening around. Conversely, the insignificant differences in the aspects of positive affect and negative affect and happiness may be due to the small number of participants so that the outcome is not representative and can not be ascertained statistically whether positive psychology interventions can actually improve subjective well being.

In addition, insignificant results are also caused by negative feelings that still have high scores, such as feelings of distress, annoyance, and anxiety, especially on both subjects, namely BS and RS. Both said that the feeling is no longer derived from the physical disability they experience, but the many rules in the home make them often feel negative feelings. RS also still has a high score on hostile feelings. RS said that friends in the social home often made her feel annoyed, even taking her stuffs several times.

Furthermore, gender factors are also predicted to be other predictors affecting subjective well being. Compared with the two other subjects, RS showed the smallest improvement in the positive affect and decreased aspects in the negative affect. This

is in line with research by Eddington and Shuman (2005) which stated that women reported more negative and depressive affects than men.

Suggestion

Suggestions to Further Researchers

Based on the results discussed earlier, the researcher suggested to increase the number of participants if you want to do similar research so that the results obtained can be more representative and add the control group to be ascertained whether the results obtained at the end of the session is the influence of the intervention or there are other factors which also contributes to the subjective well being condition.

Further research may also attempt to combine other types of interventions from positive psychology interventions to see if there are other interventions that can also improve subjective well being. Thus, research on subjective well being and positive psychology interventions can be richer and more varied.

Suggestions for Subjects

The first subject, BS, is advised to be grateful for the things he received during his stay in the social home, so does not focus too much on life outside the social home which is always regarded as pleasing by the BS. By being grateful, BS is expected to have more positive views and thoughts, and be able to cope with stress and pressure that he often felt.

The second subject, RS, is advised to be more aware of the positive things she receives while in the orphanage, as there are still many people who care about her. So she does not focus too much on the hostilities she experienced from other people. If necessary, the social home itself may request assistance to the institution to help them resolve the problem with other people, for example with group counseling. RS is also advised to maintain good qualities she has, such as helping and caring for others, so RS increasingly realize that behind the physical limitations that she has, she can still be useful and do good to others. In addition, the she is also advised to participate in skill activities, such as sewing so that she has the skills to be able to live independently when later out of the social home.

The third subject, WM, is advised to focus on what he wants to achieve by continuing to develop the self ability that he has. Furthermore, he is asked to make more concrete to reach his goals, so that he is not just imagining, but he can feel more optimistic about a better future. In addition, WM is also advised to keep improving his skills, for example by directing other people to make something, like mat and broom. Thus, WM is expected to be more aware of the ability he has and confident when dealing with the external environment.

Suggestions for the Social Home

Based on what has been explained earlier, that other factors that cause the people often feel negative feelings are the condition of the social home that is considered unpleasant and bound by many rules. Therefore, the researcher suggested that the

social home can review the rules applied because unwittingly these rules greatly affect the psychological condition of the people. The many rules and restrictions make the people often feel depressed and uncomfortable living in the social home.

In addition, this condition can also be improved by first changing the attitude of the social workers to the people. Social workers, especially those who directly connected with the people, are advised to be more friendly, for example by greeting the people when they meet and offer assistance to the people by pushing a wheelchair or getting the items they need. Social workers can also give appreciation in the form of praise or give rewards when the people do good or able to complete the task well. This is done so that the people feel appreciated with what they have done and have a sense of pride in themselves and hope that positive behavior can be repeated in the future.

Social workers are allowed to reprimand the people (not scolding) when they make mistakes, both in their daily lives and when they do the job of the skill, but the selection of words and tone of speech must also be considered well. Submission of inappropriate words, will make the people feel depressed and afraid to perform these activities in the future so that it also affects the confidence. In addition, social workers are also advised not to offend the physical disability they have though with the intention of joking because it is feared will make them feel offended and can lead to feelings of worthless and underestimated them.

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Depression, Anxiety Symptoms and Eating Behavior: Prevalence and Association among Adolescents Studying in Public Schools of Delhi

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Abstract

Data on the prevalence of mental health disorders indicates that 4.5% and 3% of the Indian population is suffering from depression and anxiety respectively. Depression is ranked by WHO (2015) as the single largest contributor to global disability, therefore there is a need to investigate the maturation patterns (gender specific) & its relationship with psychosocial & nutritional factors which impact the overall health of an adolescent. The present research was designed to study the prevalence & association of depression & anxiety with eating disorders & BMI among adolescent boys & girls (13-15 years) studying in public schools of Delhi. 300 adolescents participated in this cross-sectional study. For the assessment of depression and anxiety & eating disorders Child Behavior Checklist (CBCL; administered to the parents) and Three Factor Eating Questionnaire (TFEQ; administered to the subjects) were used respectively. Data were also collected on socio-demographic profile, dietary practices & consumption pattern, food intake (24hr recall, Food Frequency Questionnaire), & anthropometric (Weight, Height, BMI, Body fat %) profiles. Prevalence of depression & anxiety symptoms is 26%. 58% of the malnourished subjects are suffering from depression & anxiety. 89.7%, 83.3% and 87% of underweight, overweight and obese subjects (with symptoms of anxiety and depression) had reported Restrained Eating, Emotional Eating and Uncontrolled Eating respectively. This study highlights the association of mental health with eating disorders & nutritional status of adolescents. It will also serve as a strategic tool for mental health prevention & management policies designed for adolescents.

Keywords: adolescents, mental health, malnutrition, eating behavior

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Introduction

Adolescence is a critical period for onset of eating disorders. Research suggests that 90% of cases of anorexia nervosa and bulimia nervosa begin before 20 years of age (Hudson et al, 2007) whereas binge eating typically occurs during late adolescence (Marcus and Kalarchian, 2003). Apart from these disorders, many adolescents suffer from disordered eating whose symptoms are not specified. Research investigations from project EAT (Eating Among Teens) in Minnesota, involving 4700 adolescents from public schools reported that 56.9% of females and 32.7% of the males engaged in unhealthy eating behaviours, including fasting and skipping meals, as a measure to control weight (Neumark-Sztainer et al, 2002). The research findings also concluded that 3.1% girls and 0.9% boys met the criteria for a binge eating disorder and an additional 7.9% of girls and 2.4% of boys indicated subclinical levels of binge eating disorder (Ackard, et al, 2002).

Also, adolescence is a transitional life phase with the onset of depressive symptoms and mental health disorders. During preadolescence, the prevalence rate of depressive symptoms are higher in females than in males and from the age of 15 and above, rates of depression in females are nearly twice than that of their male peers. Current research evidence also concludes that eating disorders and depression are both more prevalent in females than among males during adolescence and young adulthood (Herpertz-Dahlmann et al, 2015). Cross-sectional studies have reported that, depressive symptoms during adolescence are related to an increased likelihood of participation in adverse health behaviors like smoking and suicidal ideation in adulthood. Moreover, an association between binge eating, low self-esteem, obesity and depressive symptoms is also reported. Few studies have also concluded that there is a 'reciprocal relationship' between depressive and bulimic symptoms. Shared pathways (Figure 1) of these comorbidities have also been reported. (McCaffery, 2008; Qualter et al, 2010; Ackard et al, 2011; Stice et al, 2005).

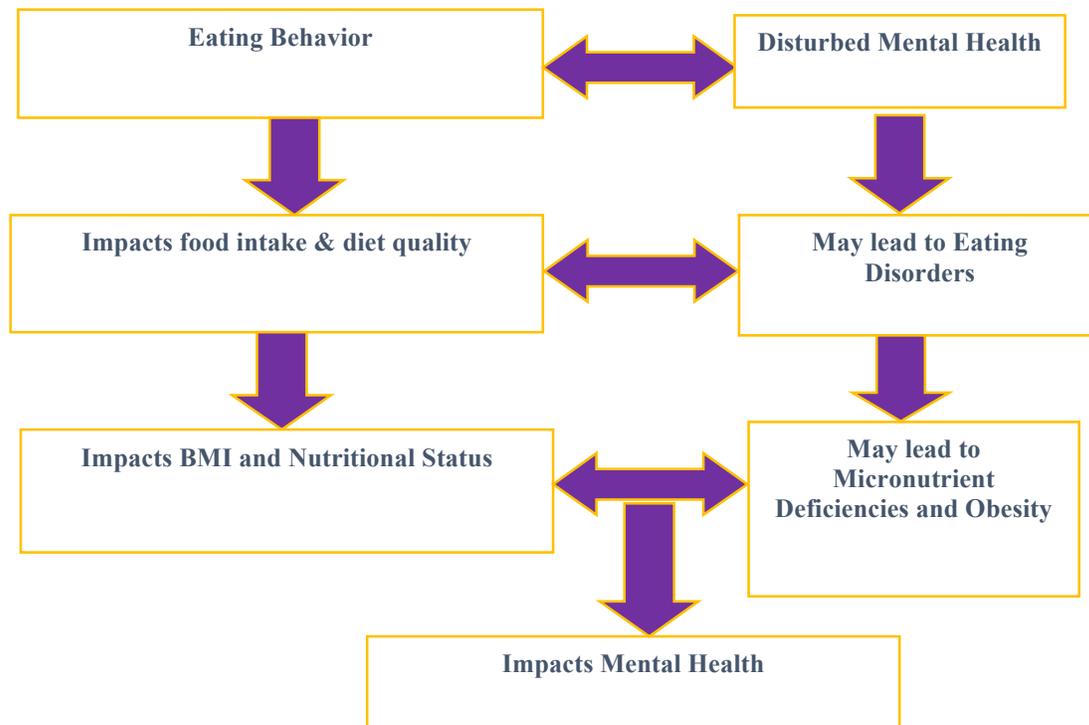


Figure 1: Proposed mechanism of Comorbidities and Shared Pathways
 (Source: Adapted From Qualter et al, 2010; Ackard et al, 2011)

Body Weight, Emotional Eating and Mental Health

Deviance from normal weight is associated with mental health disorders, lower BMI scores relate to greater problems, more specifically to anxiety/depression and social problems, higher BMI is associated with withdrawness (T.F.M. ter Bogt et al, 2006).

Response to negative emotions like depression, disappointment and feelings of loneliness results in inclination to eat, known as emotional eating (Gossens et al, 2008). Because of its association with higher body weight and intake of unhealthy foods, emotional eating is considered as a problematic eating style (Elfhag and Linné, 2005). Moreover, emotional eating behavior increases the risk of obesity and might be a precursor to eating disorders because of food cravings and overeating pattern (van Strien, 2007; Alberts et al, 2012). Research evidence from large cross sectional survey reports that emotional eating affects body weight status by enhancing palatable and energy-dense foods in women. Thus, abnormal eating behavior leads to high risk of weight gain in emotionally vulnerable population (Camilleri et al, 2014).

With advancing urbanization and westernization, a culture fostering both obesity (with the availability of an abundance of high-calorie food) and ideals of leanness and muscularity (supported by media coverage of television personalities and models), it is becoming hard for more and more adolescents to meet the social standards of body weight and image. The self - perception of being too heavy is the most substantial

trigger of wide range of mental health problems (including depression and eating disorders) in young adolescents (T.F.M. ter Bogt et al, 2006).

Taking the above mentioned research findings into consideration the present study was designed with the following objectives; to study the prevalence of depression and anxiety symptoms and eating behavior among apparently healthy adolescents and to explore the association of these disorders with Body Mass Index.

Methods

Study Population

In this cross-sectional study a sample of 300 adolescents, aged 13-15 years, studying in private schools (n=3) in Delhi from 7th, 8th & 9th grade were enrolled based on the inclusion-exclusion criteria. The sample size was statistically computed on the basis of prevalence of depression among adolescents, considering 95% confidence interval, relative precision of 5% and dropout rate of 10%. The study was approved by the Institutional Ethics Committee, Institute of Home Economics, University of Delhi, India.

Inclusion Criteria

Age 13-15 years, no prior history of any disease. Apparently healthy adolescents willing to participate in the study were enlisted; subjects were enrolled only after clearly stating the aim, purpose and the motive of the study. At the end of it, only those whose parents gave a written consent (and who themselves had signed a written assent) for their child's participation in the study were selected.

Data Collection

Prior to data collection, a pilot study was done (n=30) to pre-test the questionnaires. Information about socio-demographic profile, family history of diseases, physical activity pattern, health awareness, food intake & consumption pattern, body image perception, locus of control and eating behavior was gathered using pre-tested two interview cum questionnaire schedules. This was followed by anthropometric (height, weight and body fat %), dietary intake (24 hr recall & food frequency) and mental health assessment (depression & anxiety symptoms).

Measures and Tools

Anthropometric measurements: Height of the subjects was measured using a stadiometer in cm (to nearest 0.5cm). While measuring the height, the subjects were standing straight, with their feet together, knees straight and heels, buttocks and shoulder blades were in contact with the vertical wall. Chin was held firmly to maintain the Frankfurt plane (an imaginary line joining the tragus of the ear and corner of the eye). Shoulders were relaxed and arms were hanging loosely at the sides with palms facing the thighs. Subjects were asked to take a deep breath and stand tall to aid the straightening of the spine.

For the assessment of weight and body fat percentage, TANITA's Body Fat Monitor (UM-076) was used. The scale has a patented design of electrodes (US patent no.5415176; EU patent no. 0545014) which passes a safe low level electric signal in the subject's body. It has a maximum capacity of 150kgs. Subjects were weighed bare foot, with minimal clothing. The subjects were made to stand facing ahead. They were not leaning against or holding any support, while the weight was recorded. Zero error of the weighing scale was checked and the scale was calibrated as per Legal Metrology Act (2009). To avoid variations, measurement of weight & body fat were recorded early in the morning as and when the subjects use to reach the school.

After gathering height and weight data, age and gender specific z scores Body Mass Index (BMI) were calculated and were used to define underweight (-1SD), normal weight, overweight (+1SD) and obesity (+2SD) (WHO, 2007).

Assessment of Mental Health Symptoms:

For this purpose, we used the Child Behavior Checklist (CBCL) for ages 6-18 years. The CBCL was developed in the US and has been translated into 85 different languages including nine Indian languages, using a variety of translation methods (Hindi, Bengali, Gujarati, Kannada, Malyalam, Urdu etc). This was administered to the parents of the subjects. This is a standardized measure of parent-reported behavioral problems, with responses graded on a Likert scale, as 0-2. The responses are then summated as directed by the instrument to yield scores for nine behaviour syndromes. The summation of the responses of some of the individual syndromes yields scores for internalizing behaviors (IS), externalizing behaviors (ES), and overall scores for total behaviour problems (TS). Internalizing behaviors include behaviours such as anxious/depressed, withdrawn/depressed, and somatic problems; and externalizing behaviours include rule-breaking, aggression, and inattention. Higher scores for internalizing behaviors indicate an elevated level of depressive symptomatology (Achenbach and Rescorla, 2001). In the present study CBCL 6-18 (ISBN 978-0-938565-73-4) was used. Prior permissions were taken for the use of this tool from concerned authorities.

Assessment of Eating Behaviour:

Three Factor Eating Questionnaire – Revised 18 (TFEQ – R 18) developed by Karlsson et al (2000) was used to distinguish different eating patterns of the subjects. It consists of 18 items measuring eating behaviour on a 4-point scale (Never/Occasionally/Often/Always). It measures three aspects of eating behaviour i.e., **restrained eating** (conscious restriction of food intake in order to control body weight or to promote weight loss), **uncontrolled eating** (tendency to eat more than usual due to a loss of control over intake accompanied by subjective feelings of hunger), and **emotional eating** (inability to resist emotional cues).

Statistical Analysis

Statistical analysis was performed using SPSS (Statistical Package for Social Sciences; SPSS). Mean and standard deviations were derived for numerical data. Prevalence is reported in percentages.

Results

Socio-demographic Profile

The socio-demographic profile of the respondents is represented in Table 1.

Table 1: Socio-demographic profile of the study population

PARAMETER	CATEGORIES	TOTAL (n = 300)
AGE (years) (Mean +/- SD)	13 +/- 0.5	100
	14 +/- 0.5	100
	15 +/- 0.5	100
GENDER	Males	150
	Females	150
GRADE	VII	100
	VIII	100
	IX	100
TYPE OF FAMILY	Nuclear	156
	Joint	140
	Single Parent	4
z-scores for BMI n (%)	Underweight	55(18.5)
	Normal Weight	163 (54.3)
	Overweight	22 (7.3)
	Obesity	60 (20)

Out of 300 adolescents, 150 were males and 150 were females studying in 7th, 8th & 9th grade of the schools; 156, 140 and 4 subjects' belonged to nuclear, joint and single parent families respectively. Average age of the subjects was 14 +/- 0.5 years. As far as nutritional status is concerned, BMI of the subjects ranged from -1SD to +2SD (16.5-31.5 kg/m²).

Prevalence of Mental Health Symptoms

Prevalence rates of the mental health disorders are represented in Table 2. Based on the responses of the parents, the overall prevalence of depression and anxiety

symptoms was 26%. These disorders were affecting more females (36.4%) than males (27.5%).

Table 2: Prevalence of mental health symptoms among study population

PREVALENCE	TOTAL n = 300 (%)	BOYS n=150 (%)	GIRLS n= 150 (%)
Depression & Anxiety	78 (26)	41 (27.5)	55 (36.4)

Distribution of Mental Health Symptoms according to BMI categories

(a) Prevalence of depression and anxiety symptoms in various BMI categories

Prevalence of depression and anxiety according to four BMI categories is represented in Table 3. It is interesting to note that, an equal percentage of the subjects with depression and anxiety symptoms were falling in underweight (25.20%) and obese (25.27%) categories. On the other hand only 4.62% subjects in the normal weight category are assessed with depression and anxiety symptoms.

Table 3: Distribution of prevalence of depression and anxiety symptoms in BMI categories among study population

PARAMETER	UNDER WEIGHT n (%)	NORMAL WEIGHT n (%)	OVERWEIGHT n (%)	OBESE n (%)
Depression & Anxiety	39 (25.20)	7 (4.62)	12 (7.96)	39 (25.27)
Boys (n = 41)	16 (10.7)	2 (1.67)	6 (4.02)	17 (11.07)
Girls (n = 55)	23 (14.7)	5 (2.95)	6 (3.94)	21(14.2)

Prevalence and association of eating behavior with BMI and Mental Health Symptoms

As discussed in Table 4, it is interesting to note that 89.7% of underweight subjects (with symptoms of anxiety and depression) had reported Restrained Eating, 83.3% of overweight subjects (with symptoms of anxiety and depression) had reported Emotional Eating and 87% of obese subjects (with symptoms of anxiety and depression) had reported Uncontrolled Eating.

Restrained Eating pattern was observed more in females whereas Uncontrolled Eating is observed more in male subject.

Table 4: Distribution and prevalence of eating behavior under BMI categories (with mental health symptoms) among study population

Eating Behaviour → BMI Category (with Depression and Anxiety Symptoms) ↓	Restrained Eating n (%)	Emotional Eating n (%)	Uncontrolled Eating n (%)
Underweight	35(89.7)	2(5.1)	2(5.1)
Normal Weight	3(42.8)	2(28.5)	2(28.5)
Overweight	-	10(83.3)	2(16.6)
Obese	-	5(12.8)	34(87.1)

Quality of Diet Consumed

After assessing the 24 hour recalls and food frequency questionnaire of these subjects following observations were recorded. The diets

- were high in Saturated Fatty Acids (SFAs), Simple Sugars and Salt
- had high Glycemic Index (GI) foods
- were in dietary fibre and micronutrients
- were lacking in Omega-3 Fatty Acids

Research has supported the fact that diets with high GI foods impact the release of serotonin, high in saturated fat and low in omega -3 fatty acids increase free radical production (oxidative damage) which further impacts the release of Brain Derived Neurotropic Factor (BDNF), low in dietary fibre and high in sodium is itself a risk factor for development of obesity (inflammation process of the cells in obesity and depression are reported to be similar) (McIntyre, et al, 2010; Seaquist & Anderson, 2013; Wurtman et al, 2003).

Conclusions

Human eating behavior develops rapidly from infancy to school age. Eating is necessary for survival but it can be perturbed leading to under nutrition, over nutrition and eating disorders. Complex interplay between child's motor, sensory & socio-emotional capability, neural reward systems and homeostatic mechanism are involved in development of feeding in humans. In addition to this, influence of parents & social environment (food environment) influence the development of eating behavior. Normal development of eating behavior should lead to adequate but not excessive or inadequate weight gain during childhood. Rapid expansion of new research in this field have lead to evidence-based prevention and treatment strategies for under nutrition, over nutrition and eating disorders in children & adolescents (Gahagan, 2012).

Also, eating behaviour is a modifiable risk factor for the onset of mental health disorders. Research suggests that noticeable food patterns which precede depression are the same as those occurring during depression (Rao, 2008).

Puberty is considered one of the critical risk periods for the development of eating disorders with associated mental health disorders. Traditional researches have focused on the psychosocial effects (increased body dissatisfaction) of physical changes associated with puberty (increased adiposity) & potential consequences for onset of eating disorders (Fornari & Dancyger, 2003).

According to American Psychiatric Association (2000) the incidence of disordered eating increases dramatically during puberty. Additionally, puberty onset marks a developmental shift in the relationship between biological & environmental influences on disordered eating.

The present ongoing study highlights the association of mental health symptoms and eating behavior with nutritional status of adolescents. As per the preliminary data, it is observed that a relationship exists between mental health symptoms, eating behavior and diets of the adolescents. BMI is assessment of nutritional status, which is impacted by food intake and eating behavior. An individual's food intake further impacts his brain development & mental health status. After the results are concluded, the study will serve as a strategic approach for mental health prevention & management policies designed for adolescents.

The study adds to the growing body of nutritional neuroscience as diet and nutrition offer key modifiable risk factors for the prevention and management of mental health disorders. This further needs to be framed into public health policies and programs.

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Parenting Styles, Academic Achievement and Conduct in a Chinese School, Basis for Evolving a Management Supervisory Program

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Abstract

To describe Parenting Styles of respondents' parents, pupils' Academic Achievement and Conduct and relationships to Parenting Styles. This answered the ff: 1. Parenting Styles of Grade 6 pupils' parents according to academic achievement and Conduct and their relationships. 2. What Management Supervisory Program (MSP) can be evolved based on findings? Methodology 1. Descriptive-correlation survey method was used to get results as Basis for MSP, to improve academic achievement and 80Conduct. 2. Data: A.129 pupils from 8 sections of grade six and corresponding parents as purposive samples. B. survey questionnaire, Parental Authority Questionnaire (Buri), with certain modifications by experts' validations. C. School Records for Academic Achievement and Conduct. D. Interviews were randomly conducted. 3. Analysis and interpretation of data: frequency count, percentage, mean and chi-square of independence. Findings: 1. Parents generally authoritative 2. Highest percentage of pupils' academic achievement was moderately satisfactory and satisfactory in Conduct, Lowest was outstanding in academic and fair in Conduct. 3. No significant relationships both to Academic Achievement and Conduct. Recommendations: 1. Parenting Styles be considered in School programs. 2. The developed one year MSP with the following identified concerns be implemented: 1. Value Development 2. Discipline 3. Time Management 4. Academic Achievement. Each with objectives, strategies, activities, persons involved time frame and success indicator.

Keywords: Parenting Styles, Academic Achievement and Conduct, Management Supervisory Program

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Introduction

When a school opens its doors for the first-time, the development of the school's image begins. This reputation is determined by the perceptions and observations of students, staff, parents, and the larger community through effective school management and supervision.

Management is the process of planning, organizing, leading and controlling the use of resources to accomplish performance goals (Schermerhorn, 2005) including the academic achievement in school. As stated by management theorist Henry Mintberg, being manager in this sense is the most important job. No job is more vital to our society than that of the manager. It is the manager who determines whether our social institutions serve us well or whether they squander our talents and resources.

The school heads, department heads, and teachers are considered managers in their own right. They managed the student learning, curriculum improvement; use of instructional materials, school facilities and others in order that the school becomes acceptable to all stakeholders.

Supervision, on the other hand, refers to enhancing student learning in the school. And the ultimate purpose of supervision is the promotion of pupil growth, and likewise the improvement of the society. And the immediate purpose is cooperative to develop favorable settings for teaching and learning.

It is imperative that in enhancing student learning, teachers must constantly monitor the achievement of their students. It is observed that student achievement is sometimes related to the parenting styles and support of the parents.

There is an overall consensus that parental support leads the pack of important factors that determine the success of a child, not only in school, but even beyond school (Parenting Tips, 2001).

This paper attempts to look closely into parenting styles as perceived by the pupils, and the effects of these degrees to the achievement of the pupils and discipline in school. This paper also hopes to evolve management supervisory programs for the school.

Setting of the Study

The study was conducted at Chiang Kai Shek College, Philippines, the only institution of higher learning founded by the Overseas Filipino- Chinese that is recognized by both governments of the Republic of the Philippines and the Republic of China. It offers education in all levels.

Theoretical and Conceptual Framework of the Study

Parents would like to succeed at getting children to grow into responsible, loving and, hopefully learned individuals. Love and respect are essential in this dynamic relationships between parents and children. Certainly, communication and a good relationship are necessary, even with very young children who may sometimes have

pre-formed ideas about the signals sent out by parents. One always has to explain and edit, expand and illustrate, in order to educate and prepare children not only for small experiences but also for the bigger adventure- that is life. (Parenting Tips, 2001)

Parenting is a complex activity that includes many specific behaviors that work individually and together to influence child outcomes. Although specific parenting behaviors, such as spanking or reading aloud, may influence child development, looking at any specific behavior in isolation may be misleading. Many writers have noted that specific parenting practices are less important in predicting child well-being than is the broad pattern of parenting.

Most researchers who attempt to describe this broad parental milieu rely on Diana Baumrind's concept of parenting style. The construct of parenting style is used to capture normal variations in parents' attempts to control and socialize their children (Baumrind, 1991).

Four Parenting Styles

Categorizing parents according to whether they are high or low on parental demandingness and responsiveness creates a typology of four parenting styles: indulgent, authoritarian, authoritative, and uninvolved (Maccoby & Martin, 1983). Each of these parenting styles reflects different naturally occurring patterns of parental values, practices, and behaviors (Baumrind, 1991) and a distinct balance of responsiveness and demandingness.

Authoritarian parents are highly demanding and directive, but not responsive. "They are obedience- and status-oriented, and expect their orders to be obeyed without explanation" (Baumrind, 1991). These parents provide well-ordered and structured environments with clearly stated rules. Authoritarian parents can be divided into two types: non-authoritarian, who are directive, but not intrusive or autocratic in their use of power, and authoritarian-directive, who are highly intrusive.

Authoritative parents are both demanding and responsive. "They monitor and impart clear standards for their children's conduct. They are assertive, but not intrusive and restrictive. Their disciplinary methods are supportive, rather than punitive. They want their children to be assertive as well as socially responsible, and self-regulated as well as cooperative" (Baumrind, 1991).

Indulgent parents (also referred to as "permissive" or "nondirective") "are more responsive than they are demanding. They are nontraditional and lenient, do not require mature behavior, allow considerable self-regulation, and avoid confrontation" (Baumrind, 1991). Indulgent parents may be further divided into two types: democratic parents, who, though lenient, are more conscientious, engaged, and committed to the child, and nondirective parents.

Uninvolved parents are low in both responsiveness and demandingness. In extreme cases, this parenting style might encompass both rejecting— neglecting and neglectful parents, although most parents of this type fall within the normal range.

Because parenting style is a typology rather than a linear combination of responsiveness and demandingness, each parenting style is more than and different from the sum of its parts (Baumrind, 1991).

Parenting style affects diverse child outcomes and achieves these outcomes at least in part through parenting practices such as parent school involvement (Darling & Steinberg, 1993). Parenting-style researchers have argued that parenting style moderates the impact of a specific parenting practice such as parent school involvement by affecting the nature of the parent's influence.

Many researches overwhelmingly demonstrate that parent involvement in children's learning is positively related to achievement. Further, the researches show that the more intensively parents are involved in their children's learning; the more beneficial are the achievement effects. This holds true for all types of parent involvement in children's learning and for all types and ages of students.

Looking more closely at the researches, there are strong indications that the most effective forms of parent involvement are those which engage parents in working directly with their children on learning activities in the home. Programs which involve parents in reading with their children, supporting their work on homework assignments, or tutoring them using materials and instructions provided by teachers, show particularly impressive results.

Along similar lines, researchers have found that the more active forms of parent involvement produce greater achievement benefits than the more passive ones. However, considerably greater achievement benefits are noted when parent involvement is active—when parents work with their children at home, certainly, but also when they attend and actively support school activities and when they help out in classrooms or on field trips, and so on.

The researchers also show that the earlier in a child's educational process parent involvement begins, the more powerful the effects will be. Educators frequently point out the critical role of the home and family environment in determining children's school success, and it appears that the earlier this influence is "harnessed," the greater the likelihood of higher student achievement. Early childhood education programs with strong parent involvement components have amply demonstrated the effectiveness of this approach.

The conceptual and research literature presented above have close bearing to the present study. They all dealt with school management and supervision, the school managers' managerial skills for effective management. It also dealt with the family and children as well as the parenting and parenting styles that greatly influence the pupils' academic achievement and the discipline in school.

This study uses an instrument which looked into parenting styles as perceived by the respondents and the effects on their academic achievement and conduct grade in school.

Methods

A descriptive — correlation method of research was employed in this study. Descriptive, because it looked into the current academic standing and conduct of the student population involved in the study as well as their respective parents' parenting style. Creswell (2000) points out that the descriptive method of research is used to gather and collect information about the current prevailing situation or condition. It is used for the purpose of describing the nature of the situation as it exists at the time of the study and also to explore on the probable cause or causes of a particular phenomenon.

The study partly made use of correlation method since it tried to establish whether or not a significant relationship existed between and among the variables of the study involved, namely, academic performance and conduct of the student respondents and parenting style of their parents. A quantitative correlation approach is used to examine the relationships among two or more variables without making any attempt to influence the causal nature of these relationships.

Population and Sampling Technique

A total of one hundred twenty-nine (129) Grade Six pupils purposively selected from eight sections of Grade Six level during the School Year 2006-2007 and also the 129 parents of these pupils constituted the subjects of the study. Using a purposive sampling technique, the researcher purposively drew 20% of the pupils from each of the eight sections. According to Punzalan & Uriarte (1989), purposive sampling is done by separating the lists of subgroups in the population and simply drawing randomly the desired sample size from each subgroup.

Instruments

To be able to gather the much needed data in this study, the researcher employed a questionnaire called Parental Authority Questionnaire to determine the parenting style of each of the parents of the pupils involved in this study. For data on pupils' academic performance, the researcher requested a copy of the students' grades from the registrar's office, and for data on students' conduct, documents in the guidance office were availed of for this purpose.

The Parental Authority Questionnaire of Buri (1991) was adopted and used as the study's main data gathering instrument. It was used to measure Baumrind's permissive, authoritarian and authoritative parenting styles. It used a scale that consisted of 30 items and each item was scored using the Likert scale. Before it was finally used in this study, the researcher treated the questionnaire to an expert validation process to determine its fitness to the study sample as well as its applicability to the study's main concern. Necessary revisions were made as a result of the validation. A table of specification related to the instrument was made and was shown to the researcher's advisers for comments and suggestions. The prepared and revised questionnaire underwent validation by the teachers and parents of pupils from Chiang Kai Shek College.

From the Grade School Department, with the permission of the supervisor, the academic grades were obtained and then classified according to the following ranges and interpretation which became the basis for determining the levels of academic achievement of pupils.

Academic Grade Range	Level of Academic Achievement
93 - 95	Excellent
90 - 92	Outstanding
87 - 89	Very Satisfactory
84 - 86	Satisfactory
80 - 83	Moderately Satisfactory
78 - 79	Good
75 - 77	Fair

On the other hand, from the Department of Student Services, records of pupils' discipline or conduct grade were obtained and were classified also according to the following ranges and interpretation which became the basis for determining the pupils' level of discipline/conduct:

Discipline/Conduct Grade Range	Level of Discipline/Conduct
93 - 95	Excellent
90 - 92	Outstanding
87 - 89	Very Satisfactory
84 - 86	Satisfactory
80 - 83	Moderately Satisfactory
78 - 79	Good
75 - 77	Fair

Data Analysis

Data gathered in this research were treated statistically for analysis and interpretation relative to the problems sought from the very beginning of the study. The following statistical tools were utilized to analyze and interpret the data:

1. Frequency count and percentage, to describe the population of the study in terms of the number and ratio of pupils' level of academic achievement and level of conduct, as well as the parenting styles;
2. Mean, to determine the average level of academic performance and conduct of the pupil used in the study and the average parenting style;
3. Chi-Square Test of Independence, to determine the relationship or association between academic achievement and parenting styles and also, the relationship or association between conduct and parenting styles.

Summary and Conclusion

This study looked in to the parenting styles of the parents of Grade Six pupils enrolled at Chiang Kai Shek College during School year 2006-2007 and tried to establish its relationship to the pupils' academic achievement and their grades in conduct. Using a descriptive correlation survey method of research, this study involved 129 Grade Six Pupils purposely selected randomly from the eight sections of Grade Six Pupils and

also 129 parents of the 129 pupils participants in the study.

A survey questionnaire consisting of 20 items that determine the parenting styles of the parents of the pupils participants was adopted and used to be able to gather the data information needed in this research study. Data pertaining to the pupils' academic achievement and their conduct grades or discipline were obtained using documentary analysis made available to the researchers.

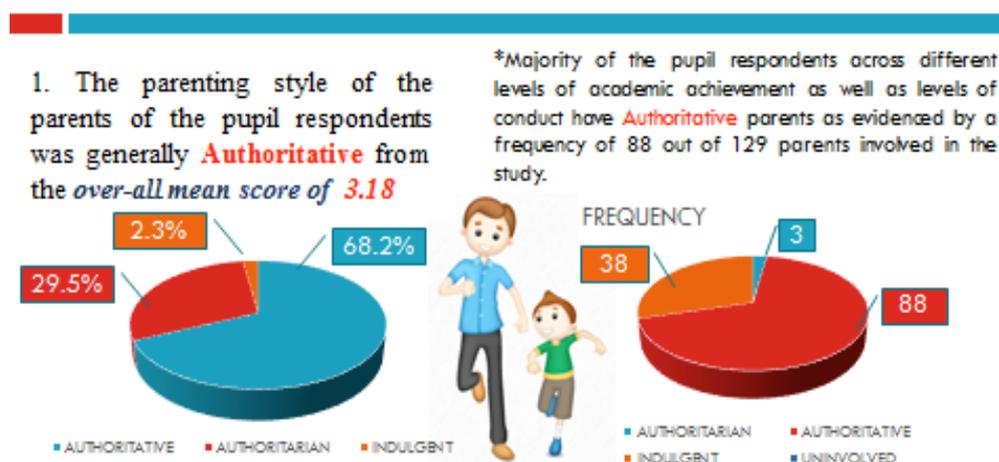
Academic Achievement data were taken from the pupils' general average contained in the school- records from the Grade School Office with the permission of the supervisor while the conduct grade or discipline of the pupils was obtained from the records available at the Department of Student Affairs.

Using Statistical tools like frequency, percentage, mean and chi-square of independent means, the data gathered from this study were analyzed and interpreted based on the specific problems raised from the very beginning of the study. These analyzed and interpreted findings became the basis of some inferences which eventually served as basis of conclusions and recommendations.

Results

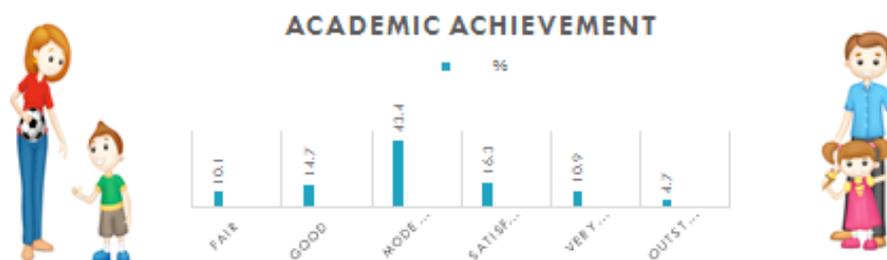
The following were the highlights of the findings of the study:

1. The parenting style of the parents of the pupil respondents was generally authoritative from the over-all mean score of 3.18.



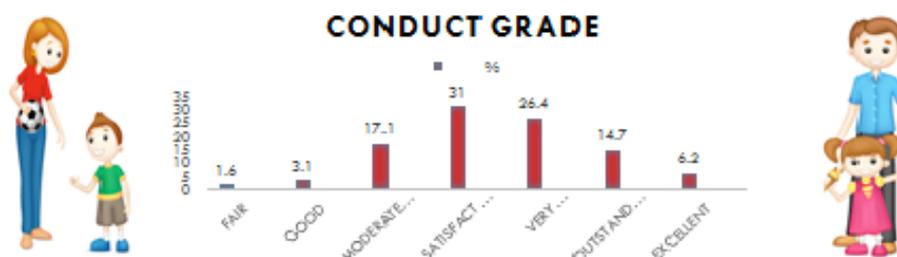
2. The highest percentage of the pupil respondents belonged to moderately satisfactory level of academic achievement while the lowest percentage belonged to outstanding level of academic achievement.

2. The highest percentage of the pupil respondents belonged to **Moderately Satisfactory (43.4%)** level of academic achievement while the lowest percentage belonged to **Outstanding (4.7%)**



3. The highest percentage of the pupil respondents had a satisfactory grade in conduct while the lowest percentage had a fair grade in conduct.

3. The highest percentage of the pupil respondents had a **Satisfactory (26.4%)** grade in conduct while the lowest percentage had a **Fair (1.6%)** grade in conduct.



4. There is no significant relationship between the pupils' academic levels of achievement and their parents' parenting style, with a computed value of $\chi^2 = 10.74$ was found to be insignificant at 0.05 level.
5. Majority of the pupil respondents across different levels of academic achievement as well as levels of conduct have authoritative parents as evidenced by a frequency of 88 out of 129 parents involved in the study.
6. There is no significant relationship or association between the parents' parenting style and the pupils' conduct, with a computed value of $\chi^2 = 13.504$ was found to be insignificant at 0.05 level. This means that parenting style is not a factor that affects the conduct of the pupils' conduct.

Conclusions

In the light of the general results and specific findings generated from the conduct of this study, the researcher concludes that although previous studies had shown how parenting styles, more particularly, parents' discipline style were directly related to the academic performance and even to the behaviors and attitudes of their children, it is also possible that in some cases and in different context, parents' parenting style may have little or no bearing at all to their children's academic achievement in school and to their discipline or conduct development as well as evidenced by the results of this particular study.

It can be inferred from the results of this study that no matter how authoritarian or authoritative the parents are in dealing with their children, it does not necessarily follow that their children would achieve high in their academic performance in school nor would have an outstanding or very satisfactory conduct.

As far as the findings of this study are concerned, it is safe to conclude that parenting style is not a factor that affects neither academic achievement nor the conduct of the pupils in school, and therefore, academic achievement as well as the conduct of pupils is both independent of the parenting style of their parents.

Recommendations

Taking into account the conclusions drawn from the findings of the study, the researcher hereby recommends that:

1. Parenting styles of the pupils' parents be still consider in dealing with school programs relative to the academic achievement and conduct development of the pupils, despite the "no relationships" findings of the study.
2. School needs to look more deliberately into the mediocre academic achievement of the pupils.
3. School needs to deliberately look into the generally satisfactory conduct of the pupils with the end view of raising to it to a higher level;
4. Similar study be conducted to validate the study's findings;
5. Further studies be made in relation to the factors contributing the generally satisfactory level of the pupils' academic achievement as well as their conduct or discipline; and
6. The developed management supervisory program be implemented to specific areas of concerns including those concerning academic achievement and conduct or discipline.

Limitation

The researcher evaluated the parenting styles of randomly selected pupils from the Grade six level of Chiang kai Shek College, a private Chinese school in Manila, Philippines, their academic achievement and discipline or the conduct grade were likewise investigated. This study is limited to the Grade six pupils as the researcher had with pupils and these under his care has led him to see that parents are actually among the largest contributors to the child's overall development, which includes his/her academic as well as conduct in school.

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Identity, Recognition and Terrorism: The Case of Tripura, India

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Abstract

Taylor's (1994) notion of "politics of recognition" construes identity as being a creation of existence of recognition or dearth of it. "Misrecognition" can result into undignified disreputable view of self. It is intriguing indeed that membership of a radical extremist group can create and escalate a sense of community, power and identity to people who might otherwise feel alone, powerless and insignificant (Schaefer, 2007). India is a land with diversified culture of multiple ethnic communities. The country is also witnessing various ethnic conflicts and forms of terrorism. The researchers thus fancied whether in political terrorism, subsistence of ethnic identity and search for "recognition" can play a role. The present research was thus conceived and conducted at Tripura, a North-eastern state of India that has been facing the problems of insurgency since 1980s. The present research was conducted on 16 groups, comprising of 6-10 members from three different age groups namely young adult (18-22 years), middle aged adult (45- 55 years), old adult (65 years above) who are members of either /or two different ethnic groups namely tribal people and non tribal Bengali people. The method of Focus group discussion was used for collecting data from them. The findings signifies that resentments against other ethnic groups, socio-economic problems experienced, improper practices of the political parties, unacceptable government policies along with pressurisation and external aid facilitating the enrolment of terrorists in the organizations etc. contributed to the rise of terrorism in Tripura.

Keywords: Terrorism, social reality, tribals, non tribals, ethnic identity

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Introduction

Taylor's (1994) notion of "politics of recognition" construes identity as being a creation of existence of recognition or dearth of it. "Misrecognition" can result into undignified disreputable view of self. It is intriguing indeed that membership of a radical extremist group can create and escalate a sense of community, power and identity to people who might otherwise feel alone, powerless and insignificant (Schaefer, 2007). India is a land with diversified culture of multiple ethnic communities witnessing various forms of ethnic conflicts and terrorism. The researchers thus fancied whether in political terrorism, subsistence of ethnic identity and search for "recognition" can play a role. This search for "recognition" is the resultant of perception of the social reality of an individual which influences his learning, memory, expectation and attention.

Social Reality a product of human dialogue, emerges out of the accepted social tenets of a community, involving relatively stable laws and social representations (Bocking, 1995). Social reality calls for uniformities among observers (Luhmann, 2002) harboring one's enmeshed identity with the reference group. One can have several selves (Tajfel and Turner, 1979) and multiple social identities derived from the perceived membership of social groups (Hogg and Vaughan 2002). The dialectical nature of identity influences the creation and maintenance of both collective social identities and individual identity which in turn depends heavily on the view as reflected through the majority culture. When people do not receive "recognition" or their identity is under threat, it can bear on their social and individual identities.

Social Identity Theory asserts that group membership creates in-group / self-categorization and enhancement in ways that favor the in-group at the expense of the out-group. The examples (minimal group studies) of Turner and Tajfel (1986) showed that the mere act of individuals categorizing themselves as group members was sufficient to lead them to display in group favoritism. After being categorized, individuals seek to achieve positive self-esteem by positively differentiating their in-group from a comparison out-group on some valued dimension. This quest for positive distinctiveness means that people's sense of who they are is defined in terms of 'we' rather than 'I'. The consequence of self categorization is an accentuation of the perceived similarities between the self and in-group members, and perceived differences between the self and out-group members. Social identity also involves a process of *depersonalization*, a cognitive representation where self is viewed as interchangeable with other in-group members (Turner 1982).

The progress of ethnic identity includes the identity formation in an individual's self categorization in, and psychological attachment to, an ethnic group. Ethnic identity is characterized as part of one's self concept and identification. Development of ethnic identity follows a process of the construction of identity over time, (Phinney, 1990) due to an amalgamation of experience and actions of the individual (Phinney and Ong, 2007) and includes attainment of knowledge and understanding of in-group, as well as a sense of belonging to an ethnic group. Ethnic identity is sometimes

interchanged with, held distinct from, or considered as overlapping with racial, cultural and even national identities.

“The Tribals of Northeast India like any other ethnic groups are also affected by identity crisis, in socio-cultural and political fields” (Pyal, 2006: 215). “Ethnic movements in North-East India involve the assertion of identity around certain social problems, historic cultural legacies and political exigencies by way of organizing themselves into an ethnic body to concretize their identity” (Rizvi, 2006: 17). The insurgent groups in Tripura emerged at the end of the 1970s, as ethnic tensions between the Bengali immigrants and the tribal native population who were outnumbered by the former bringing them down to minority status.

The researchers thus fancied whether in political terrorism, subsistence of ethnic identity and search for “recognition” can play a role. It was assumed that views of the two population the tribal and non tribal Bengalis, would not be same and also perception may vary in accordance with age owing to the difference in lived experience. The present study intends to get an idea of the social reality perception regarding the rise of terrorism in Tripura across ages (young adults, middle adults and old adults) and ethnic group (tribal and non tribal Bengalis).

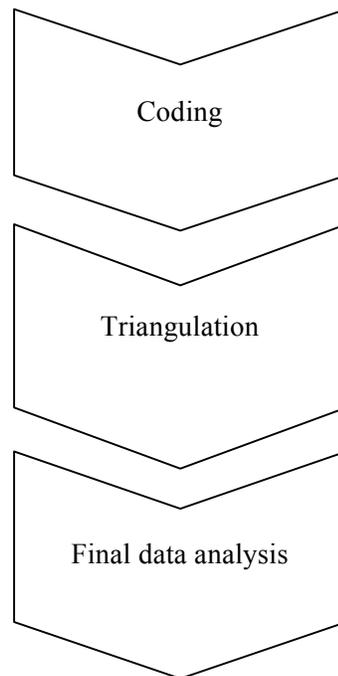
Research Objectives:

The purpose of the present study is

- To explore the perception of Tribal Young Adults, middle adults and old adults of Tripura (having direct exposure) about the causes of terrorism of Tripura.
- To explore the perception of Non-Tribal Young Adults, middle adults and old adults of Tripura (having direct exposure) about the causes of terrorism of Tripura.

Method

In the present research, an attempt was made to find out the differences in social reality perception regarding the development of terrorism in Tripura across ages (young adults, middle adults and old adults) and ethnic group along with the exposure to the events (Tribal, having direct exposure and Non-tribal having direct exposure to terrorism). As the study is regarding the perception of terrorism of Tripura, it is obvious that the population selected for the study will basically be the residents of Tripura. The tribal and nontribal adults from different parts of Tripura were selected for the study. The social reality of these people of different age and geographical areas are not same as there are differences in caste, language, geographical location, available facilities for normal livelihood and the most important, their exposure (direct, indirect or no exposure) to the terrorism. Therefore, their perception regarding the causes of terrorism of Tripura may also vary.

**Area selected for Study:**

The area of the study includes the capital city of Tripura, i.e., Agartala wherefrom the data of the non-tribal population were collected. Agartala is a place where the evidence of terror attacks is minimum, but has an impact of such activities. The data of the tribal population was collected mainly from Kulai and Ompi where the majority of the population is tribal. Ompi and Kulai is such a place where the terrorist activities were a daily affair at some time when the terrorist organisations were active in Tripura.

Study Population:

The research was conducted across people of different ages and belonging to different social reality. There were in total 16 groups taken for the research. Each group comprised of a minimum of 4 and a maximum of 10 members according to the availability considering the criteria of selection.

Sampling method:

The sampling technique used in the present study is Purposive Sampling as diverse range of participants were selected depending on their age, caste, nature of exposure to the terrorist activities. Hence the Tribal or Non-tribal Young Adults, Middle Aged Adults and Old Aged Adults who were willing to participate in the process of the collection of data, were typically selected from the different parts of Tripura according to the requirements of the study.

Research Approaches, Tools and Techniques:

The Approaches:

Qualitative Research:

Qualitative research is a system of inquiry which tries to build a holistic, largely narrative, description to inform the researcher's understanding of a social or cultural phenomenon. Qualitative research is done in natural settings utilizing a combination of observations, interviews, and document reviews.

Qualitative research is effective to attain culturally specific information about the values, opinions, behaviors, and social contexts of particular populations. The potentiality of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the "human" side of an issue – that is, the often conflicting behaviors, beliefs, opinions, emotions, and relationships of individuals. The findings from qualitative data can often be extended to people with characteristics similar to those in the study population, gaining a rich and complex understanding of a specific social context or phenomenon typically takes priority over eliciting data that can be generalized to other geographical areas or populations.

Research Tools:

Focus Group Discussion:

Focus Group Discussion is one of the important qualitative data collection method efficient in helping researchers learn the social norms of a community or subgroup, as well as the range of perspectives that exist within that community or subgroup. The researcher acts as a moderator in focus group who leads the discussion by asking participants to respond to open-ended question – that is, questions that require an in-depth response rather than a single phrase or simple "yes" or "no" answer. A second researcher i.e., the note-taker takes detailed notes on the discussion.

As focus group discussion was done; the research setting was prepared accordingly. The target respondents of each group were contacted, invited and informed separately about the panel discussion. They were given the required instructions. The initiator or moderator initiated the discussion asking the research questions. The respondents were interrupted by the initiator or moderator only when the discussion went out of track. The verbatim of discussion were recorded through audio tapes and later written transcriptions were made hearing the audio tapes. The verbatim of the Tribal groups were first written in Kokborok and then translated to English that of Non tribals from Bengali to English. Similarly for the non-tribal group translated from Bengali to English. Focus group discussions were conducted for each group and the discussion went on till it came to a saturation point. For each group at least two focus group discussions were conducted till the discussion came to saturation point. However, it was noticed that many a times the discussion came into saturation level in the 1st

discussion itself. But still the group was given a chance of discussion for second time with a viewpoint that after the discussion they might have missed out some points or the discussion has given some new inputs which the subjects might have realized later on. The data were interpreted with the help of meanings extracted through Open Coding, Focused Coding and Axial Coding which finally ended with Selective Coding.

Questions for the focus group discussion:

Questions	Possible outcomes
<ul style="list-style-type: none"> • What are the causes of terrorism in Tripura? 	<p>The participants may explore the various causes responsible for the development of terrorism in Tripura.</p>
<ul style="list-style-type: none"> • What led to the control of terrorist problems in Tripura? 	<p>The participants might have missed some points while discussing the first question. But when they discuss about the various factors of control over the problem they may add some new inputs.</p>
<p>Other questions were set according to the topics of the discussion. Some of these questions were:</p> <ul style="list-style-type: none"> • Why one brother of the same family chooses terrorism and the other not? • You said to fight against exploitation they choose terrorism, is it the right way? • Will getting independence solve all the problems? • Many educated persons too join terrorism, then is lack of education a prime cause of terrorism? • How deprivation leads to terrorism? Please explain. 	<p>The participants might think in a new direction and give some more inputs according to the questions asked.</p>

Research analysis:

To analyze the data coding of the key trends that emerge from the discussion, was done. The codes went through three phases as delineated below : open coding, focused coding and axial coding (Corbin and Strauss 1990, Charmaz 2006). Following coding triangulation was adopted in the present research in order to validate the analysis procedure. In the present study, Investigator Triangulation has been adopted for validating the data and their process of coding. Here, other than the researcher and the supervisor, two more researchers analyzed the data collected. The researcher and the supervisor have been working with this present topic for the past nine years.

Other than the Supervisor and the researcher, there were two coders. The first coder though has done his Masters in Psychology and PhD in Psychology. The other coder is a postgraduate in Psychology and has been a helping hand to the researcher right from the beginning of the research.

Ethical Consideration:

Identity of the respondents was kept confidential. Before the collection of data, the goals of the research were clearly explained to the respondents. While conducting the group discussion, the verbatim of the respondents were recorded in a voice recorder which was done with prior permission and consent of the respondents. As the topic of the research is a sensitive issue and might introduce some communal disharmony, the researcher was quite cautious not to use any such words of dialect which might otherwise effect the respondent's (especially the tribal respondents, as the terrorist population were mainly tribal and the researcher being a Bengali) emotions or impair the whole situation. Considering the research objectives and the occurrence of the terrorist activities, the tribal respondents were convinced not to deceive any kind of information, especially their attitudes regarding the Bengalis in Tripura and freely discuss about the issue.

Results and Discussion:

The collected data had undergone the various stages of coding viz. Open Coding, Focused Coding and Axial Coding.

Table 1: Tribal Young Adults (18-22 yrs) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> To drive away the Bengali speaking people out of Tripura Vengeance against Bengali community Exploitation by Bengalis Increasing migration of the Bengali speaking people from neighbouring places Agartala, the capital city of Tripura being dominated in every spheres by Bengalis 	<ul style="list-style-type: none"> Grievances against Bengalis
<ul style="list-style-type: none"> Lack of education and exposure of common people Inadequate income of common people Easy way of earning of the common people by joining the terrorist group Inadequate facility to secure government job facilities Gross unemployment of the tribal people 	<ul style="list-style-type: none"> Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> Motivation to create new nation Lack of initiative by the government to improve the plight of the people Inability of Government to stop migration of Bengali speaking people from neighbouring places 	<ul style="list-style-type: none"> Resentment against the Government
<ul style="list-style-type: none"> Anger against political leaders Focus of the political leaders for electoral benefit 	<ul style="list-style-type: none"> Resentment against the practices of the political parties
<ul style="list-style-type: none"> Maltreatments by the police False legal suit filed against common people by the police 	<ul style="list-style-type: none"> Maltreatment by the authority
<ul style="list-style-type: none"> Quarrels at home 	<ul style="list-style-type: none"> Familial problems
<ul style="list-style-type: none"> Pressure created by terrorist outfits to join the organization Using false legal suit to pressurize the common people to join the terrorist outfit 	<ul style="list-style-type: none"> Pressurisation by the terrorist outfits
<ul style="list-style-type: none"> To fight for the development of the tribal people 	<ul style="list-style-type: none"> Betterment of tribal people
<ul style="list-style-type: none"> Miscommunication among the Bengalis and the Tribals due to language diversity resulting into communal dispute 	<ul style="list-style-type: none"> Communication gap due to language barrier

Table 2: Non Tribal Young Adults (18-22 yrs) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> • Sense of socio-economic deprivation of the tribal people • Lack of education of the common people • Gross unemployment of the tribal people • Lack of proper socio-economic facilities for the common people 	<ul style="list-style-type: none"> • Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> • Responsibility of the political parties for creation of terrorist organization on own interest 	<ul style="list-style-type: none"> • Resentment against the practices of the political parties
<ul style="list-style-type: none"> • Jealousy against Bengalis which in turn initiated sense of inferiority among the Tribal peoples • To safeguard themselves against the exploitation of the Bengalis • Out of jealousy they consider themselves superior than the Bengalis. 	<ul style="list-style-type: none"> • Grievances against Bengalis
<ul style="list-style-type: none"> • Exposure towards terrorist activities by electronic media and subsequently its imitation • Spreading of communal hatred speech by certain religious institution 	<ul style="list-style-type: none"> • Motivated by hatred speech
<ul style="list-style-type: none"> • Terrorist groups are motivating the youths to join the terrorist outfits creating peer pressure • Taking advantage of the turbulent adolescent nature the terrorist groups are motivating them to join the terrorist outfits 	<ul style="list-style-type: none"> • Pressurisation by the terrorist outfits
<ul style="list-style-type: none"> • Funding from other countries has escalated terrorist activities 	<ul style="list-style-type: none"> • Funding from other countries
<ul style="list-style-type: none"> • Lack of proper guidance and awareness about the negativities associated with terrorist activities 	<ul style="list-style-type: none"> • Inadequacy of proper guidance
<ul style="list-style-type: none"> • Lack of initiative by the government to improve the plight of the people 	<ul style="list-style-type: none"> • Resentment against the Government
<ul style="list-style-type: none"> • Fulfilment of their demands of access to socio-economic facilities 	<ul style="list-style-type: none"> • Betterment of the Tribals

Table 3: Tribal Middle Aged Adults (45- 55 yrs) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> • To get their land back from the Bengalis who are at present dominating Tripura • Vengeance against Bengali community • Ethnic clashes between Bengalis who formed the majority of population and Tribals who became minority • Increasing migration of the Bengali speaking people from neighbouring places • Feeling of insecurity for the increasing number of Bengalis in the population • To protect the land of the Tribals from the possession of the Bengalis • Exploitation of the Tribals by the Bengalis • All the lucrative opportunities being possessed by the Bengalis 	<ul style="list-style-type: none"> • Grievances against Bengalis
<ul style="list-style-type: none"> • To get facilities from the government after surrender from the terrorist organisations • Gross unemployment of the Tribal people • Problems in transportation leading to inadequacy of proper facilities • To earn money they join the terrorist groups • Lack of proper facilities for the Tribals • Lack of education of the Tribals • Deprivation of the Tribals from proper facilities • Low economic status of the Tribals 	<ul style="list-style-type: none"> • Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> • Responsibility of the political parties for creation of terrorist organization for their own interest • Focus of the political leaders for electoral benefit 	<ul style="list-style-type: none"> • Resentment against the practices of the political parties
<ul style="list-style-type: none"> • Easy means of shelter to neighbouring countries after carrying out different terrorist activities 	<ul style="list-style-type: none"> • Interference of the neighbouring countries
<ul style="list-style-type: none"> • To protect the rights of the Tribals • To fulfil the demand of the Tribals in terms of education, money, right for land • They are fighters not terrorists who are fighting for the tribal rights • Improve the position of the Tribals in terms of getting required facilities for leading a better life 	<ul style="list-style-type: none"> • Betterment of tribal people

<ul style="list-style-type: none"> • Deprivation from the basic facilities of the Tribals by the government 	<ul style="list-style-type: none"> • Resentment against the Government
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Table 4: Non-tribal Middle Aged Adults (45- 55 yrs) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> • Deprivation from the basic facilities of the Tribals by the government • Negative effect of capitalism in the sense that poor become poorer • Loopholes in the administrative system leading to underdevelopment of the Tribals 	<ul style="list-style-type: none"> • Resentment against the Government
<ul style="list-style-type: none"> • To fight for the basic rights of the Tribals 	<ul style="list-style-type: none"> • Betterment of tribal people
<ul style="list-style-type: none"> • Help from the neighbouring countries for providing shelter, weapons and hideouts • Funding from other countries to carry on the terrorist activities 	<ul style="list-style-type: none"> • External help from the other countries
<ul style="list-style-type: none"> • Lack of proper guidance and awareness about the negativities associated with terrorist activities 	<ul style="list-style-type: none"> • Inadequacy of proper guidance
<ul style="list-style-type: none"> • Lack of proper facilities to the Tribals • Lack of education of the Tribals 	<ul style="list-style-type: none"> • Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> • Responsibility of the political parties for creation of terrorist organization for their own interest • Focus of the political leaders for electoral benefit 	<ul style="list-style-type: none"> • Resentment against the practices of the political parties
<ul style="list-style-type: none"> • Exploitation of the Tribals by the Bengalis • Grievances against Bengalis for possession of all the facilities meant for the Tribals 	<ul style="list-style-type: none"> • Grievances against Bengalis
<ul style="list-style-type: none"> • Provocation by other countries to carry on terrorist activities with a motive to expand their business of weapons • Spreading of communal hatred speech by certain religious institution 	<ul style="list-style-type: none"> • Motivated by hatred speech

Table 5: Tribal Old Adults (65 yrs above) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> • Responsibility of the political parties for creation of terrorist organisation for own interest • Responsibility of the political parties for creation of terrorist organisation for getting their power back 	<ul style="list-style-type: none"> • Resentment against the practices of the political parties
<ul style="list-style-type: none"> • Ethnic clashes between Bengalis who formed the majority of population and Tribals who became minority • Increasing migration of the Bengali speaking people from neighbouring places • Unfair deeds by the Bengalis taking advantage of the innocence of the Tribals • Protection of the land of the Tribals from being occupied by the Bengalis 	<ul style="list-style-type: none"> • Grievances against Bengalis
<ul style="list-style-type: none"> • Economic deprivation • Lack of education of the common people 	<ul style="list-style-type: none"> • Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> • Protection of the rights of the Tribals • For fulfilling the demands, the Tribals were bound to join the terrorist groups • Prevention of social menace like stopping early age marriage • Protection of the Tripura Tribal Autonomous District Council areas from being occupied 	<ul style="list-style-type: none"> • Betterment of tribal people
<ul style="list-style-type: none"> • Lack of initiative by the government to improve the plight of the people • Responsibility of the government for creation of terrorist organization in order to kill the villagers 	<ul style="list-style-type: none"> • Resentment against the Government
<ul style="list-style-type: none"> • Inaccessibility of the police to dense forests which are suitable places of shelter of the terrorists 	<ul style="list-style-type: none"> • Shortcomings of the police to control the situation

Table 6: Non-tribal Old Adults (65 yrs above) residing in Tripura

Focussed Coding	Axial Coding
<ul style="list-style-type: none"> • Exploitation of the Tribals by the Bengalis • To protect the land of the Tribals from being occupied by the Bengalis by cheating • Increasing migration of the Bengali speaking people from neighbouring places 	<ul style="list-style-type: none"> • Grievances against Bengalis
<ul style="list-style-type: none"> • Economic deprivation of the Tribals • Lack of education of the common people • Opportunity for high income of the common people in less time 	<ul style="list-style-type: none"> • Socio-economic problems experienced by the common people
<ul style="list-style-type: none"> • Responsibility of the political parties for creation of misunderstandings among the Tribals and Bengalis ultimately resulting into formation of terrorist organisation • Responsibility of the political parties for creation of terrorist organisation • Focus of the political leaders for electoral benefit • Taking advantage of economic deprivation by the political parties • Provocation of the political parties by taking advantage of the sense of deprivation among the Tribals 	<ul style="list-style-type: none"> • Resentment against the practices of the political parties
<ul style="list-style-type: none"> • Provocations by the urban educated Tribals creating a miscommunication among the rural uneducated Tribals and the Bengalis • Spreading of communal hatred speech by certain religious institution 	<ul style="list-style-type: none"> • Motivated by hatred speech
<ul style="list-style-type: none"> • Taking advantage of economic deprivation by the terrorist organisation 	<ul style="list-style-type: none"> • Persuasion by the terrorist outfits
<ul style="list-style-type: none"> • Easy means of shelter to neighbouring countries after carrying out different terrorist activities 	<ul style="list-style-type: none"> • Interference of the neighbouring countries

A salient perception of all respondents irrespective of ethnic affiliation and age positions Bengalis as liable for the initiation of terrorism in Tripura with diverse interpretation of the phenomenon. The Bengalis perceived that, mistreatment of the tribals by their ancestors paved the way to terrorism by incubating grievances leading to radical outburst of terrorism. To them, dissidence of the tribals stirred up owing to fear of losing the land, culture, and language. It is the political parties, who benefitted out of the situation.

The Tribals however looked into the phenomenon from a differing perspective. The perceptions of the tribals about the Bengalis positions the latter as dominant usurpers with all conveniences, who exploited the Tribals, subsumed their lands tactfully employing cultural, symbolic and financial resources. For saving the land and to flight against exploitation the tribals resorted to terrorism. The terrorist groups are the “saviors” of the Tribals and must be called “fighters” not “terrorists”. The sole motive of these groups was to cleanse Tripura from the Bengalis, the foremost impediment of tribal development, for ensuring peace and eradicating all predicaments.

The differential perceptions may be attributed to the differing social reality perception and marginalized ethnic identity. Ethnic identity certainly impacts the development of self perception and other (members of other ethnic groups) perception. Thus search for “recognition” can play a role in triggering ethnic clashes as worse as political terrorism.

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***Prevailing from Traumatic Experience of Assault: From the Perspective of
LGBTIQ Individuals***

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Abstract

When the constitution of a country constraints some citizens as criminal, based on their choice of sexual partner, it is expected that crimes will be committed against them, as a result of social discrimination and lack of legal protection. Although NALSA verdict (2014) by Supreme Court of India edict to give the freedom in choosing one's own gender, and to protect the rights of individuals of 3rd gender, but that did not make any difference in the crime rate and discrimination against the LGBTQ individuals (specially against Transgender individuals). Grappling and coping with the trauma and psychological state of the individuals who have been through these kind of experience evokes interest. Thus, 20 self identified LGBTQ individuals were communicated by the snowball sampling method and were interviewed for the present study. Among them 10 individuals have been through any kind of physical or sexual abuse, and other 10 individual have not faced such physical or sexual assault. They were asked about their experience of traumatic events and the psychological effects of the event, how they fight their way back and gained the strength to cope with that. They were also asked about the perception of homosexuality, transgender and transsexual individuals of the Indian society, their subjective well being, perception of happiness and how they comprehend the meaning in life, the responses of the two groups were compared. In this context the presence of transphobia in our society, and among the cisgender homosexual and bisexual individuals was also mentioned by the participants.

Keywords: Transphobia; assault, trauma, coping; psycho-social factors; LGBTQ

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Introduction

“Rare are the circumstances anywhere in the world today where we are able to understand and feel safe within our bodies, to name, seek, and express our desires, and to be able to articulate dynamic and wide-ranging understandings of our sexualities. Rarer still are understandings of sexuality that reach beyond sex, violence, disease on the one hand, and reproduction, marriage, and silence on the other”

- Transgender activist of Chennai, India.

In India, sexuality has long been a silent battleground. Each decade has taught more about the ways in which it underlies almost every aspect of our lives, making the socially enforced silence that envelops issues of gender and sexuality seem increasingly more deafening. Globally and locally, the faith, science, identities, and cultures deny them space for articulation and exploration, refuse them inclusive and interconnected definitions of sexuality that speak of power and politics as much as about the act of sex, or simply take from them languages and spaces of protest.

In the last decade, the queer movement in India began to openly organise around the rights of transgender and homosexual and bi-sexual people not just to be free of violence, but to be able to give their medical histories to their doctors without shame or fear of criminal action, to be able to hold a passport, and to be able to be free of discrimination in the workplace, schools, hospitals, and within their homes. As a result of which NALSA verdict (2014) by Supreme Court of India edict to give the freedom in choosing one's own gender, and to protect the rights of individuals of 3rd gender, but that did not make any difference in the crime rate and discrimination against the LGBTQ individuals (specially against Transgender individuals).

Discriminating behaviour against lgbtq individuals and sexually marginalized groups is a global scenario, even in 21st century. Indian society is not an exception in this matter. Those who do not fit in the typical gender role and sexual orientation of hetero-normative society, faces many difficulties in day to life as well as in family. The reason behind this kind of discrimination on the basis of gender identity and sexual orientation is homophobia and transphobia.

Homophobia is a psychological term originally developed by Weinberg (1973) to define an irrational hatred, anxiety, and or fear of homosexuality. More recently, homophobia is a term used to describe the fear, discomfort, intolerance, or hatred of homosexuality or same sex attraction in others and in oneself. Examples of homophobia include hate crimes, derogatory comments, jokes that slander, denial of services, and other oppressive actions or beliefs (Bonner, 2009).

Trans-phobia can be described as an irrational fear of gender non-conformity or gender transgression, such as a fear of, or aversion to, masculine women, feminine men, cross dressers, transgenderists, transsexuals and others who do not fit into existing gender stereotypes about their birth gender (Whittle, 2006). The use of the word ‘phobia’ in this context is not intended to imply that the transphobic person and/or the victim of transphobia are suffering from a disorder.

Many homosexual and transgender individuals face discrimination and physical violence as a result of homophobia and transphobia, which can leave a deep mark on their mental health and traumatized them in later life. Trauma can be defined as a physical injury or powerful psychological shock that has damaging effects (Oxford dictionary of psychology).

The coping with that trauma can be done with the help of mental health professionals, after the clinical diagnosis.

But the turning up rate to a mental health professional or psychologist is profoundly low in India. Hence, the person with traumatic life event often left alone by himself/herself to cope with it. Dealing with the experience of negative incidents often become difficult for them, and as expected it often hampers the well-being and self esteem of the individual (Singh, 2006).

Individuals with disturbed well-being and self esteem feel less happy and not very much satisfied with their lives in general, due to the lack of sense of mastery of their own life, which are key aspects of subjective well-being (Diener et al. 1999).

The existing literature shows that importance of self esteem and measures of a sense of purpose and meaning in life both correlate significantly and positively with psychological well-being (Hartling, 2004). As the happiness derives from having a purpose of life and maintaining a certain level of wellbeing thus accepting and exploring every aspect of one's life could also play a part in achieving self esteem and developing felicitous spirit.

Thus, the present study aims to explore the life experiences of Lesbian Gay Bi-sexual and Transgender individuals who have faced any trauma and their own ways of coping and co habilitating with it, along with their perception of happiness and meaning in life to define their state of well being.

Literature review

It is very unfortunate to report that A whopping 74 percent of the transgender persons have had to leave home and their birth families because of being transgender and having faced violence and abuse, often leading to having little or no contact with them nor receiving any kind of support — financial nor emotional [Swasti Health Resource Centre (2016, June)].

A 2007 study documented that in the past one year, the percentage of those MSM and Hijras who reported: forced sex is 46%; physical abuse is 44%; verbal abuse is 56%; blackmail for money is 31%; and threat to life is 24%.

Singh, Dew, Roberts, & McDaniel, (2009) reported not having an accurate estimate of the types and prevalence of interpersonal trauma experienced by transgender people of color during an Atlanta based study. This can be partially attributed to the lack of standardized reporting of the prevalence of interpersonal trauma among subpopulations such as transgender persons at the national, state, and local levels (Herbst et al., 2008; Mizock & Lewis, 2008). Additional reasons for the absence of accurate interpersonal violence statistics may be because of transgender persons' (i)

uncertainty that their reports of interpersonal violence will be believed, (ii) concern that a perpetrator will retaliate and interpersonal violence will escalate if reported, (iii) fear of being “outed” about their gender identity and/or gender assigned at birth, and/or (iv) concern that the process of reporting interpersonal violence will not be handled in a culturally proficient manner (Dworkin & Yi, 2003).

There is a growing body of literature examining the traumatic life events transgender people may experience due to transphobia. (Nemoto et al., 2004, p. 725), and may path breaking researches has been conducted such as- Burstow (2003) challenged the traumatology field to focus on the voices of survivors and engage in a “radical” understanding of trauma and trauma work by focusing on the voices of survivors and their strengths for healing. From radical perspective, Burstow asserted, “decent trauma praxis simply cannot rest on a deficiency model” (p. 1298) to sustain the oppressive social systems and institutions that allow trauma to occur remain unnamed.

Methods

Sample- 20 Lesbian, Gay, Bi-sexual, Transgender individuals (self identified) was interviewed. Among them 10 individuals have been through any kind of physical or sexual abuse, and other 10 individual have not faced such physical or sexual assault. 20 Self identified LGBTQ individuals were communicated by the snowball sampling method and were interviewed for the present study. The participants were in the age range of 20-35 years. They were Bengali speaking and have passed 12th grade (10+2)) of education, the minimum. They belong to middle and upper middle socio-economic class.

Procedure- In case of the present study, semi-structured interview has been used. Semi-structured interviews consist of several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail. Open-ended questions were asked for the purpose of data collection in the interview. The participants responded to the pre-determined set of questions asked by the researcher, but they didn't stick to simply answering what is being asked by the researcher. Instead, they went on talking about different life experiences. The participants were asked to state the attitude of the society towards homosexuality and transgender individuals, and their own experience of the same. Those who have faced any physical and/or psychological assault were asked about their feelings about those incidents, and the method of prevailing from the traumatic experience. Their perception and perspective of happiness and meaning in life was also discussed briefly in this context.

The questions were asked to the participants one by one and with his/her consent, the answers or responses were recorded by using an audio recorder. No obstruction so as to hinder their spontaneity was provided when the participants spoke. He/she was allowed to take his/her time in case she/he posed a brief pause or made any gestures or movement. No cross questions were done. The duration of the interview ranged from fifteen to thirty minutes. All the questions were asked in Bengali.

Questions of semi-structured interview –

1. According to you what is the attitude of society towards homosexuality?
2. Tell me about the unfortunate incident that happened to you.
3. How did you feel at that time?
4. Does that memory still bother you? How do/did you cope with those feelings?
5. What is happiness according to you?
6. What is your opinion about purpose or meaning in life?

Data Analyses- The data analysis consists of the following steps:

■ **Transcription:**

The first step is transcribing the recorded interviews to a level of detail which is required for the research. For mere word-by-word transcription of thirty minutes of interview resulted in 2-3 hours of transcription. Transcribing is useful to get a grip on the material and the monotonous process of transcribing opens up a flow of ideas interpreting the text.

■ **Open coding:**

Coding starts with open coding, in which codes are identified without any restrictions or purpose other than to discover nuggets of meaning. It begins with reading through the transcripts multiple times so as to become familiar with the structure content and context of it. After that each statement of the transcript is read carefully so as to identify and highlight the meaning units (also called line by line coding). The main secret of open coding is a mental openness that allows for the discovery of the unexpected along with a curiosity that does not allow for final closure, even after texts have been read and codes identified from it. Coding is thus a very questioning activity. Open coding is particularly about labelling and categorizing of phenomena. This must be a careful activity as names come with many connotations.

■ **Focussed coding:**

In focus coding, the meaning units are labelled or given descriptive or analytic course that sum up the content of that portion of data. These labels are referred to as 'categories'. The core category gives central meaning to the conclusions of the research and is often the 'holy grail' that the researcher is seeking. It is the main theme of the situation and may represent a central problem or issue for the people involved. Once the core category is identified, then other related categories can be linked to it, leading to an integrated and coherent explanation of the subject of research.

■ **Axial coding:**

Axial coding occurs where there is a strong focus on discovering codes around a single category, for example looking for interactions, strategies and so on that relate to the category. For example in a category of 'greeting', there may be a search for encounters with others, talk about previous encounters and emotional impacts from meeting others. Axial coding can also be used to develop categories, seeking relationships that will expose a category. Where open coding is about identification and naming, axial coding is about links and relationships.

Strauss and Corbin (1990) identify a Paradigm Model by which coding looks for:

- Causal conditions
- Contextual factors
- Actions and interactions taken in response to the phenomena
- Intervening conditions that assist or hinder actions and interactions
- Consequences of actions and interactions

Axial coding may be done at any time, even before firm categories are identified. Axial coding also helps identify relationships between categories and the links that create a web of meaning for the purpose under study.

Results (Axial Coding)

Group-A (Those who have been through any kind of physical or sexual abuse)	Group-B (Those who have not faced such physical or sexual assault):
1. attitude of society towards homosexuality:	
Lack of information	There is a social taboo.
Lack of support	Stigmatizing homosexuality
Stigmatising homosexuality	Lack of support for equal rights for every one.
Stereotypical ideas.	Silver screen effect
Pretention of acceptance.	Lack of information.
2. About the incident/incidents that happened:	
Mostly bullied since school.	
Happened at home, with a family member being the offender.	
On public transport.	
Forcefully touched.	
Pictures taken without consent.	
Gang raped.	
Beaten by gang.	
Blackmailed if refused to establish a sexual relationship.	
Threatened to disclose my sexual preference to parents.	
Dragged to a doctor, who claimed to be a sexologist	
Forced to take the medicines.	
3. The immediate feelings afterwards	
I feel scared.	
It scarred me for the life time.	
I changed my route of school.	
I feel like I should just quit school.	
I felt suffocated.	
I can not express my feelings so I felt depressed.	

I didn't get out of my home for a long time.	
I hated myself for let them bully me.	
I was weak and alone.	
I can't protest because they were in a group and I was alone.	
I feel distressed in every step.	
I questioned my identity.	
4. Their own ways of coping with that trauma	
It became bearable with time.	
Tried to escape in fantasy world.	
Learn to live with these feelings.	
Being engaged with own self.	
Seek help and support of siblings.	
Found support in community, after they started going to the gatherings and social events.	
Cutting off the connection with all the offenders.	
Listening to music.	
Leaving those feelings behind.	
Got help from their teachers.	
Interaction with other people who faced discrimination in support groups.	
5. Happiness according to them:	
Need for power	Social support
Getting well with family	Freedom of choice
Freedom of choice	Maintain a equilibrium
Need for affection	Need for affection
Enduring each day.	Need for achievement
It's a journey all through life.	Self esteem
It's momentary and can be found in small things.	
6. Meaning in life according to them:	
Having affiliation	Social desirability
Social acceptance	Self esteem
Specific achievements	Selflessness
Living without any restrictions	Need for affiliation
Having an identity.	Positive motivator
Affiliating with significant others.	Freedom of choice

Discussion

The result reveals that the participants perceive our society as homophobic and transphobic. Homophobia is the irrational fear and aversion to homosexuality, and to lesbian, gay and bisexual (LGB) people, based on prejudice (Weinberg, 1973). Transphobia can be described as an irrational fear of gender non-conformity or gender transgression, such as a fear of, or aversion to, masculine women, feminine men, cross dressers, transgenderists, transsexuals and others who do not fit into existing gender stereotypes about their birth gender (GLSEN, 2002; Whittle, 2006). The use of the word 'phobia' in this context is not intended to imply that the transphobic person and/or the victim of transphobia are suffering from a disorder.

Lesbian, Gay, bi-sexual and transgender persons are subject to discrimination in the in a number of ways: direct discrimination, harassment, bullying, and ridicule to become socially 'frozen out'.

Most of them described the reason behind the negative attitude to be "lack of knowledge" and "having stereotypical ideas about LGBTQ community". Research suggests that lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) youth are at greater risk than their same-age counterparts of experiencing a wide variety of traumas. In fact, some traumas may be specific to LGBTQ youth who are at risk for discrimination, harassment, and abuse because of their sexual orientation and/or gender identity (Mooney, 2017). According to the National Child Traumatic Stress Network (2005) - a traumatic event is one in which "we experience an immediate threat to ourselves or to others, often followed by serious injury or harm." (p.4.).

Unfortunately, most of the abusive incidents happened at school or at home, with offenders being known person. Some of the participants reported being harassed on public transport, where they were forcefully touched. But most of the abusive incidents out side their home was gang organised. That occurs in many forms such as- Pictures taken without consent; Beaten by gang; Threatened to disclose my sexual preference to parents. Some abuses went to the extent of gang raped and blackmailing for establishing a sexual relationship. Literature suggests that some youth actually experience victimization because of their sexual orientation or others' perceptions of their orientation (D'Augelli, Grossman, & Starks, 2006; Dragowski, Halkitis, Grossman, & D'Augelli, 2011).

When they tried to inform their family members some of them were dragged to a doctor, who claimed to be a sexologist and was forced to take the medicines.

Hence, abused person feel scared and tried to ignore the contacts with the offenders as much as possible. In case of the incidents, that happened at public transport or on roads the abused person avoided getting out of home for a long time. These isolation makes them feel suffocated and the person can not express his/her feelings they felt depressed. After a certain period of time they felt week and alone, which leads towards a feeling of anger and rage for, not being able to protest and protect himself/herself. In some cases it lasted so long that they started blaming their sexual orientation and questioning their gender identity as well. According to the National Child Traumatic Stress Network (2005); when one faces assault- "they feel terror,

helplessness, or horror because of the extreme seriousness of what is happening and the failure of any way to protect against or reverse the harmful outcome”.

In order to cope with those feelings they tried to escape in fantasy world, and become engage in their own world. Some of them reported that “it became bearable with time”. But it turns out that cutting the contacts with the offenders helps to reduce the negative feelings. Some of them said to be involve in music and art to find peace of their mind. Interaction with other people who faced discrimination in support groups help to restore their mental health. Most of the participants said that they found support in community, after they started going to the gatherings and social events. As it is suggested by many clinical practitioners, that positive supports are useful methods of coping with trauma (Briere and Scott; 2006). Support looks different for everyone. The best way to maintain a healthy emotional state is to recognize the need for support and actively set those things in place, as- “human connection is vital to our survival”.

When asked about the perception of happiness; the first group indicates the need for power and freedom of choice, a journey of life, which includes enduring each day. Which could be the result of the stressors they faced and those feelings of being weak, or helpless that have haunted them for a long time. This finding echoes Hartling’s (2004) assertion that “resilience is typically discussed in the literature as related to internal control and individual mastery, which may not always be congruent with the resilience experiences of persons from historically marginalized groups due to their experiences with oppressive systems”. The other group emphasized on Social support and freedom of choice, along with need for achievement and affection.

Similar thing was reflected in their detection of meaning in life; the first group mentioned that meaning of life derives from having an identity and affiliating with significant others. Family represented comfort, security, and validation for the individual (Brill & Pepper, 2008). Yet with regard to their sexual orientation and gender identity, participants struggled for acceptance, which makes them preoccupied with the idea of being affiliated with their family and significant others. The participants, who faced traumatic events, suggested Social acceptance; Specific achievements and Living without any restriction as the marker of meaningful life, where as the other group focused upon Self esteem, Selflessness and having freedom of choice.. The traumatic life events might have persuaded their need for building social connections and developing a support system through it. Previous studies also mentioned that, for minorities and mercialised groups resilience becomes “an outcome of one’s ability and opportunities to connect, reconnect, and resist disconnection” (Hartling, 2004; p. 341).

Conclusion

The above discussion suggests that, there is lack of knowledge and stereotype ideas about LGBTQ community. Though there is pseudo pro lgbtq people, but still the scenario is changing over the years.

Lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) youth are at greater risk than their same-age counterparts of experiencing a wide variety of traumas. In fact, some traumas may be specific to LGBTQ youth who are at risk for

discrimination, harassment, and abuse because of their sexual orientation and/or gender identity.

Violence and abuse against LGBTQ individual happens in many forms such as; bullying, beating, corrective rape and blackmailing.

Coping became easier with the help of family and social support. Interacting with people who faced the similar types of experience become helpful in coping.

The prolonged suffering evoked the need for power as an essential component of happiness.

Meaning in life includes the affiliation of significant others as a result of desire for being accepted and having social support.

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Guided Imagery Music Reduces School Phobia: A Case Study

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Abstract

Guided imagery and music is a form of music therapy introduced by Helen Bonny in 1970. This method is using music as an imagery trigger to a client, and the client is asked to portray the image in forms of paintings, drawings or literal description. This study was conducted to a 15 years old girl who experienced school phobia. She repetitiously felt nausea at school, experienced giddiness and headaches from the time she arrived at school up to lunch time; she often asked permission to go to the clinic and requested to go home earlier. As a result, she had low performance in school evaluation. The Hamilton Anxiety Rating Scale (HARS) indicated severe level of 38 (severe). Six (6) GIM sessions were conducted to her, and each session included the GIM phases which are: the prelude, the relaxation and focus, the music and imagery, and the integration. The prelude phase consisted of description of problems, the relaxation and focus phase consisted of relaxation while listening to music. The music and imagery consisted of the process of portraying the images based on the music being listened. The integration phase consisted of the process of expressing the images into drawings or paintings. The post-test result indicated the HARS score was 15 (normal to mild). The phobia was eliminated, and the girl now has returned to school normally.

Keywords: Music Therapy, Guided Imagery Music, School Phobia

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Introduction

Anxiety is a common problem that are experienced by many people, as common reaction to a harming or pressuring situation (Kaplan, Saddock, and Grebb, 2007). This reaction is usually characterized by uncomfortable feeling followed by autonomic symptoms such as headache, short breath, upset stomach, and anxious. Over anxiety, can also be a disturbance, that will cause dysfunction in some important area in a person's life. In DSM-V (APA, 2015), anxiety is defined as fear of future threat, and Anxiety and Depression Association of America (ADAA) stated that anxiety is the highest disorder in American population right now, which affect almost 40 millions of people or around 18% or US population (Kessler et al., 2005)

There are many forms of anxiety disorders, one of the anxiety disorder that quite common is social anxiety disorder. This form of anxiety disorder usually comes with feature and symptoms of the feelings of anxiety that comes when the person is in a social situation, or in a crowd, and surrounded by strangers, which will result in fear of being in a crowd, fear of being observed by others, and fear of being humiliated (Haugard, 2008). Children and teenagers with social anxiety disorder usually comes with symptoms of stomach ache, head ache, giddy, fast heartbeat (tachycardia), sweating, or feeling of about to pass out. For children with this disorder, social situation can be more frightening and causes the anxiety symptoms, rather than in a situation where they are separated from parents.

Generally, anxiety can cause disturbance in a person daily life, especially in functioning in work place, and also in social interaction (Haugard, 2008). For person with social anxiety disorder, crowd situation will disturb their function, where they feel like they are being observed, which will cause disturbance in their daily life. Many of social anxiety disorder cases in children and adolescence, are related to school phobia, or refusal to school, which shown by their high number of absence because they don't feel well at school, or at time where they have to go to school (Knollman et al, 2010). This will also affect their socialization and achievement at school, because children with social anxiety disorder tend to refuse participating in school activity such as sport, and withdrawing from other students (Haugard, 2008). This will also make these children feel lonely, and criticize themselves, and also looking for the causes of why they can't be like any other students (Ollendick & Becker, 2002).

Intervention programs for anxiety disorders, especially for social anxiety disorder become an important thing to help people with high level of anxiety. A few intervention program that has been done to reduce anxiety in adolescence, such as *cognitive behavioral therapy*, *relaxation therapy*, *behavioral therapy*, *family therapy*, *art therapy*, and *music therapy*. In this research, we will be focusing on using music therapy and art therapy as an intervention to reduce anxiety. This research will use the Guided Imagery and Music method that are founded by Bonny (Wigram, Paderson, & Bonde, 2002) where music is used as a form of media to guide the imagery that are seen by the client when they hear a composition of music, and ask them to portray it in a form of literary and art.

Literature Review

Anxiety

Barlow (by Nelson & Israel, 2015) define anxiety as an emotion state that oriented on the future, characterized by perceptions of uncontrolled things that are predicted to harm the person. Kaplan (2007) also defined anxiety as a response to a threatening situation, and it can be considered as a normal response that go through development, changes, new experiences, and also finding identity. Mash & Wolfe (2015) defined anxiety as an emotion that are dominated by strong negative emotion, shown by tense body as a reaction or anticipate threat in the future. Nelson & Israel (2015) differ between anxiety and fear, where fear is a reaction to a present threat and characterized as an alarm reaction, and anxiety is a negative emotion that oriented to future threat, characterized by inability of a person to control the anxious feelings of future threat. Anxiety is also different with worry, where worry are defined as a negative thought that are uncontrollable (Nelson & Israel, 2015).

Social Anxiety Disorder

Social anxiety disorder is characterized by fear of social situation, where the person is surrounded by strangers, and feel that he/she will look bad or judged in front of others. Usually, these people will have an increasing of anxiety level when they are in a certain social situation, such as meeting their parents in law, taking a driving license test, speaking in a meeting, etc. Stein & Stein (2008) stated that person with social anxiety disorder have fear of having bad impression from others, and tend to avoid it. They fear of doing something that made them feel ashamed or humiliated in front of other people. This will result in avoidance and withdrawal from social situation, which they tend to feel small in front of strangers (Mash & Wolfe, 2015).

Social anxiety disorder is different from general anxiety. The differences are the capability if a person to handle the increasing of anxiety effectively. Stein & Stein (2008) stated that for a general to normal anxiety, they planned and act to handle this anxious feeling, which sometimes do not go as it planned. When the situation is repeated for a few time, the anxious feeling will decrease, and they can act more normal. But for a person with social anxiety disorder, they have a different process of handling their anxiety, and their performance and functioning will be disturbed because of their anxiety, so many of them choose to avoid situations that will trigger their anxiety, even though this will make another problem, and their anxiety will also increase (Golding & Gross, 2010).

School Phobia

School phobia, defined by Csoti (2003), is a complex disorder that involves a range of disorders, including separation anxiety, agoraphobia, and social phobia, although the anxiety is centered around the school environment. School phobic child is usually afraid of leaving secure home environment, and the safe presence of the main care givers. School phobia is different from truanting, where truant students are

intentionally do not go to school, but also refuse to be at home too (Csoti, 2003). In school phobic children, they do not attend school because they feel symptoms that are so severe and not truants, because they have a specific anxiety about school and remain at home with their parents presence. School phobic have fear and anxiety to go to school, where truant student doesn't have (Csoti, 2003).

Music Therapy

Music Therapy is a method that use a control use of music, where it will take an effect on human physiology, psychology, and integration on emotion from a person during a treatment of a disorder or disease (Choi et al., 2008). Choi et al. (2008) stated that music therapy methods are divided by two major methods, which are active music therapy and passive music therapy. Active music therapy use music to engage client to be involved with the music actively such as playing an instrument, dance to the music, or singing. Passive music therapy use music as a relaxation method, which the client asked to listen to a piece of music to create a mental relaxation. There are several common approaches that are used in the process of music therapy, one of the most common approach is Bonnie Guided Imagery and Music Therapy.

Bonnie Guided Imagery and Music Therapy (GIM)

Guided imagery and music (GIM) is an approach of music therapy form introduced by Helen Bonny in 1970. This approach is a form a receptive music therapy, where the main procedure is actively listening to music (Wigram, Pederson, Bonde, 2002). Bonny (Wigram, Pederson, Bonde, 2002) define GIM as a process where the imagery is triggered by the music. Another definition about GIM is an approach in music psychotherapy which specifically use a classical music as a program to open and triggered personal experience. This approach is a holistic, humanistic, and transpersonal approach, which open all aspects of experience, psychological, emotional, physic, social, spiritual, and other aspects in human life (Goldberg, in Wigram et. al., 2002). GIM technique has three components inside it, which are music, imagery, and art. The music that are used is carefully chosen for each client, according to their history and in keeping with their present mood, and the areas of concern the guide wishes to address. It is possible for the music to be the same selection on a number of different occasions, or it can be different for each session, according to the need of the traveler (Bonnie, 2010). The first piece of music needs to match the mood and energy of the traveler. The Music is seen as a projective screen and co-therapist. It gives structure and holds, evokes sensations and feelings and may become an object for transference (Bonnie, 2010). Images that comes is a response to music. It comes in many forms and involve the senses. Visual images, for example, include relived early life experiences of personal value or importance. Events in which there is ambivalence or an unsatisfying completion come up for review. Life events, small or large, come up. Usually these have been caught deep in the subconscious where most therapies do not reach. The music, carefully chosen, is able to access the feelings around these events and allow a reliving of the original experiences (Bonnie, 2010).

Form of art is used to review the imagery and feeling sequences for the purpose of making more concrete the events that have taken place. This form of art helps the traveler to clarify the experience; validate (give assurance of the value of what happened), highlight, emphasize feelings; and connect images or feelings with everyday life events (Bonny, 2010).

Research Hypothesis

To describe more accurately about how guided music and imagery reduces school phobia, and to question the effectiveness of this method in reducing anxiety, an assessment and intervention was designed for the subject. The hypotheses tested in this phase of the study included:

H0: Guided imagery and music therapy method have no effect on reducing anxiety in school phobic children

H1: Guided imagery and music therapy method have a positive effect on reducing anxiety in school phobic children

Research Method

Subject

The participant of this research is a 15-year-old girl, anonym as YL. She shows symptoms of anxiety disorder and school phobia, which she felt nausea at school, experienced giddiness and headaches from the time she arrived at school up to lunch time; she often asked permission to go to the clinic and requested to go home earlier. These feelings made her refuse to go to school, because she feels that those nauseous feelings only come up when she is at school. She also feels ashamed and embarrassed as she repetitiously stays in clinic because she feels sick, and feels that she is different from other student. Another additional information, YL have a problem with the relationship with her mother, which she felt not very close to her, since her mother is working in another city.

Procedure

Assessment of the level of anxiety is conducted as a baseline or pre-test of this research. Level of anxiety is assessed using Hamilton Anxiety Rating Scale, a likert anxiety scale that scales anxiety into 3 level; normal, moderate, and severe.

Six GIM session then conducted to the participant. Each session consists of four phases, which are prelude, relaxation and focus, music and imagery, and integration.

Phase 1: Prelude

The prelude is the guide to get to know the client, his life history, his present concerns, and his aims for treatment. Each session will begin with a discussion about client's story and problems, and also a possible goal for the session. The traveler (how

we called the client) and the guide will agree upon a focus, intention, or key image the client wants to work on.

The intention is like a steering wheel: it gives purpose and meaning to the journey as it engages the traveler to explore the inner landscape. The chosen intention enables the guide to choose the appropriate music for the session, matching the energy and the mood level of the client.

Phase 2: Relaxation and focus

In this phase, the client or the traveler is asked to lie down on on a couch or reclining chair with the guide close by instructing. The therapist is using one of two progressive methods of relaxing the body and mind: 1) Tension/release (tighten muscles and release them); or usually a breathing technique with inhale/exhale of breath. I usually added a verbal suggestion to “let go.” in the relaxation process. The purpose of this relaxation technique is to prepare the traveler by minimizing the kinesthetic body responses to allow a deeper state of consciousness, to concentrate on the auditory and visual senses, to get beyond our usual busy mental processes, and so the client keep focusing to the guide’s voice.

Phase 3: Music and Imagery

The music is basically seen as an auditory co-therapist and partner of the guide. It acts upon the body, mind, and spirit of the traveler. The guide is cooperating with the music. When the traveler focusing on the music, the guide will ask questions to help the clients focus on the imagery. Frequently asked questions are such as, "Where are you right now?", "What are you drawn to?", "What do you feel?", "What colors do you see?", "Are there any other person beside you?". Other guides that are used while the GIM usually are instructions, like, “look around you, you can see the blue sea right in front of you. You can feel the breeze of the wind on your face, you can smell the sea, you can feel the cold water and the wave of the sea touching your feet, and you feel very calm and relax”

Phase 4 Integration:

When the music comes to an end the traveler/client is brought back to the usual state of consciousness by bringing to a close the imagery experiences.

With eyes open and sitting up the guide helps the traveler review the imagery and feeling sequences for the purpose of making more concrete the events that have taken place. This can be done with several methods.

Sharing verbally with the guide brings insight and understanding. Although no effort is made to interpret the meaning of the images, the guide helps the traveler to clarify the experience; validate (give assurance of the value of what happened), highlight, emphasize feelings; and connect images/feelings with everyday life events. Evoked images have a “life of their own.”

Other methods is relieve the images in paintings and art such as literal creations. This help turning the images in the imagery “alive”, and helps to apply it in the real world

Another anxiety level assessment is conducted at the end of sixth session, as a post-test or evaluation of anxiety level. Researcher might also evaluate the number of school attendance 2 weeks after the intervention, to evaluate on the school phobic symptoms.

Result

Hamilton Anxiety Rating Scale Result (Pre-test & Post-test)

Table 1
HARS level comparisons during pre-test and post-test

<i>Subject</i>	<i>Pre-test</i>	<i>Post-test</i>
YL	37 (Severe)	18 (Normal)

The results from the pre-test and post-test that conducted before and after the treatment is given shows significant decrease on the anxiety level, which shows before the treatment conducted, her anxiety level was at the severe level, and after the treatment is conducted, the anxiety level decrease to normal level. This shows that the treatment has an effect on reducing the anxiety level of the subject. Another evaluation is also make, by comparing the number of absences and leave because of sick feeling, before and after intervention is conducted. The evaluation is conducted two weeks before the treatment, and two weeks after the treatment is conducted. The result shows that there is significant decrease on the number of absences and the number of early leave.

Table 2
HARS level & absence in pre-test and post-test

	HARS Level	Absence (in two weeks or 10 days of school day)	Sick Leave (in two weeks or 10 days of school day)
Pre-test	37 (Severe)	3	7
Post-test	18 (Normal)	0	2

Discussion

Main Theme and Focus of Problems

The main theme and focus of the problems mostly focus on relationship with her mother, school grades and performance, and social interaction in peer groups. These three main problems are the main core problems that resulting her in feeling anxiety

in public area, especially at school. Her relationship with her mother started off badly since the first session, since her nauseous feeling seems related to her mother presence. She said there are also times when she didn't feel sick, usually when her mother drove her to school. She also telling me about her feelings towards her mother, her disappointment about her mother about her mother working in another city that she felt since last year. There are feelings of left behind, unloved, and also anger that are repressed since her mother didn't live in the same city with her. Expressing it through music seems to reduce the anger, and letting her accept and let go the anger she's been feeling. Improvement of her communication with her mother also help her to deal with her anxiety and anger towards her mother, since the cooperation of her mother is also a big factor to reduce her anxiety and school phobia.

The topic of social interaction comes out in two sessions, which she feels she cannot fit in to the peer groups. Feeling of ashamed and embarrassed due to frequent sickness and absence lead to her withdrawing from the peer groups. Reducing the anxiety is likely impact the decrease and vanishing of the feeling of sickness, which allow her to start interact with her peer groups without worrying that she might feel sick or nausea. The effect of decreasing anxiety also taking impact on her school performance, which she can now concentrate and focus on studying without feeling nausea and sick. Her increasing of her school grades and performance shows that the GIM has decreased the anxiety and school phobia.

Contributing Factors

Evaluating on the results, we can see that there are a few of contributing factors that helps this research. One of the factors are the cooperation and collaborations with her family, especially her mother, which helps a lot in the progress of the intervention. Her mother willingness to listen to her disappointment, and also trying to get close to her is also helping this intervention to work.

Music choices are also a contributing factors, which the music that are chosen must be matched to client's mood, but also encouraging her to move on and lighten up. Emotion and relationship development between therapist and clients are also an important factor, which also helps the intervention to work.

Conclusion

The aim of the study is to see the effectiveness of Guided Imagery and Music to reduce anxiety in school phobic students, and also to improve and fix problems that comes as the main core of the anxiety. From the results of the research, we can conclude that the intervention method of guided imagery and music is an effective method to reduce anxiety and school phobia in children. This are shown by decreasing of the symptoms of anxiety that shows in school, like the decreasing number of school absences, vanishing of nausea and sick feelings, and also shown in the decreasing anxiety level on Hamilton Anxiety Rating Scale.

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The Effect of Similarity and Ranking on Competitive Performance

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Abstract

Natural selection involves a competition amidst scarcity among species. Thus, organisms tend to engage in competitive behaviors, and humans are no exception to this. Social comparison influences competitive behavior such that people are motivated to perform better than others. The social comparison model of competition identifies individual factors and situational factors as important determinants of competitiveness. The study aimed to determine how similarity between competitors (individual factor), ranking (situational factor), and the interaction between them influence competitive behavior. The experiment was conducted using a 2 (similar or dissimilar) x 3 (undisclosed, top, or bottom) between-subjects factorial design. Using convenience sampling, 120 undergraduate students were recruited to compete against a confederate in two motor-based games. Results revealed that the main effects of both factors and their interaction were not statistically significant. Nonetheless, the study sheds light on the attitudes of Filipino college students in the face of competition and how the interplay of subjective and cultural values and situational factors shape their behavior.

Keywords: similarity, ranking, competitive performance, competition, values

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Introduction

Human life is fraught with competition. From childhood to old age—whether at home, in school or at the workplace—people inevitably find themselves competing with those around them. The social structure associated with competition entails that the success of one person or group corresponds to the failure of the other. Furthermore, competition often activates people's tendency to compare themselves to others because individuals learn the quality of their performance vis-à-vis their competitors (Stanne, Johnson, & Johnson, 1999). The propensity to use others as a yardstick for judging one's own abilities and opinions is the major tenet of Leon Festinger's (1954) theory of social comparison.

Social Comparison Model of Competition

Just as competition fosters social comparison, so does the tendency to socially compare motivate people to compete (Stanne et al., 1999). Nonetheless, although social comparison plays a key role in determining competitive behavior, there are multiple factors that can influence the extent to which competitive behavior is expressed. Stemming from Festinger's (1954) social comparison theory, the social comparison model of competition presents competitive behavior as a product of both individual and situational factors (Garcia, Torr, & Schiff, 2013).

Individual factors are those rooted on the idiosyncrasies of each person. Such factors are further subdivided into *personal factors*, which include individual differences among competitors and the relevance of the arena of competition to an individual's sense of self, and *relational factors*, which include similarity among competitors and their level of relationship intimacy. On the other hand, situational factors are those that arise from the environment and competition structure that are salient enough to influence participants' competitive behavior. These factors include: (a) number of competitors, (b) reward structures, (c) social categories, and (d) proximity to a standard (i.e., ranking). The summation of all of these factors, both individual and situational, determine *comparison concerns* which refers to the need to attain and maintain superiority over others. Comparison concerns, in turn, affect the expression of competitive behavior.

Similarity

One of the individual factors that influence competitiveness is an individual's similarity with their opponent. According to Festinger (1954), people choose to compare themselves to those whose abilities and opinions are similar to their own. Thus, the greater the similarity perceived among competitors, the more competitive they would behave towards each other (Garcia et al., 2013). Researchers have looked into the effect of similarity on the competitiveness (see Dakin & Arrowood, 1981; Garcia et al., 2013; Miller, 1984; Wheeler et al., 1982), whether the similarity among competitors is related to performance in the area of competition or not (e.g. personal characteristics such as age, sex, educational background). It has been found that people are more likely to compare themselves to similar than dissimilar others in terms of their personal attributes and opinions that are related to or predictive of a particular performance (Goethals & Darley, 1977, as cited in Suls & Wheeler, 2000).

Concerning the matter of opinions, Goethals & Darley (1977, as cited in Suls & Wheeler, 2000) posit that opinions may be of two kinds—belief and value—and the role of similarity as a factor in social comparison differs with either. Whereas beliefs are verifiable, values are devoid of any intrinsic truth. The former is within the realm of objective analysis while the latter is more concerned with subjective preferences. With regard to beliefs, people are more drawn to compare themselves to those whose beliefs are dissimilar from theirs. In contrast, people more readily compare themselves to those who share similar values.

As far as we know, there has yet to be a study that investigates how comparison of value-based opinions impact competitive behavior. It would be interesting to test if the earlier findings about values (i.e. people are influenced more by others who share the same values as they do) may also be applied to evaluate competitive behavior.

Ranking

As a situational factor in the social comparison model of competition, ranking plays a vital role in intensifying competitive behavior among individuals (Garcia et al., 2006). By gaining objective information regarding one's position relative to others, ranking activates the unidirectional drive upward within an individual (Garcia et al., 2013). That is, knowledge of one's rank tends to motivate people to perform better to secure a higher position than that of their competitors. When people compare themselves to opponents who have surpassed them in a valued dimension, upward social comparison occurs and this often incites pain, failure, and inadequacy in the self-evaluator (Garcia et al., 2006; Markman et al., 1993). Nonetheless, such negative feelings drive individuals to seek improvement (Markman et al., 1993) and even foster competitive behavior (Garcia et al., 2006; Kilduff, Elfenbein, & Staw, 2010). However, upward social comparison can only influence self-improvement if people see themselves as capable of changing and if the standard is deemed attainable (Stapel & Koomen, 2000; Lockwood & Kunda, 1997, as cited in Corcoran et al., 2011).

Furthermore, an individual's level of competitiveness increases as the degree of proximity to any meaningful standard increases as well. This standard may either be the top, bottom or some other predetermined threshold (e.g. cut-off points). As such, people tend to act more competitively when their scores fall at the top or at the bottom than when they are ranked in the middle (Garcia et al., 2013).

Whether individuals exhibit greater competitive behavior at top or bottom rankings appears to differ according to cultural context. Heine and colleagues (2001) investigated how success and failure affect motivation of Japanese and North American students. The participants were given a test, the difficulty of which depended on the treatment condition to which they were assigned, and checked how they supposedly performed relative to other students in their university. The distribution of scores was skewed such that those who were given the difficult version of the test would fall below the 50th percentile while those who received the easy version would fall above. Later, the participants were given another similar test and were timed according to how long they persisted answering the items. The results showed that Japanese students persevered more in tasks that follow failure (i.e., being ranked at the bottom) while Canadian students were more motivated by previous triumphs (i.e., being ranked at the top).

Garcia and his colleagues (2013), however, note the dearth of research investigating links between competitive behavior and an individual's lack of certainty regarding one's rank. Support for such a link can, at the time of writing, be implied from research (Garcia & Tor, 2007) that found that removing rank uncertainty tends to lower comparison concerns and consequently competitive behavior.

Nonetheless, on possible interaction effects with similarity, Wood (1989) found that when people's ranks remain undisclosed and they are given information unrelated to the performance dimension (e.g. personal characteristics), they evaluate themselves against others who are similar to them in these respects. At the same time, she also observed from previous research that participants' desire to beat similar opponents is sometimes even outweighed by their interest in them. Thus, in the absence of rank information, similarity in personal attributes tend to weaken competitiveness among individuals.

The Current Study

Reviewing existing literature has shown that similarity and ranking both influence competitiveness by inducing comparison concerns. However, researchers have yet to look into the effect of similarity of values and rank uncertainty specifically on competitive behavior. Related literature on the effects of their interaction is even scarcer. In fact, Garcia and colleagues (2013) recognize the lack of studies that focus on the interaction between individual and situational factors and its influence on comparison concerns and competitive performance.

Thus, the current research aims to address the aforementioned gaps in knowledge regarding the social comparison model of competition. It also serves to challenge the validity of the model in the context of an Asian culture.

Based on previous studies, we predict that: (a) similarity of values between competitors affects competitive performance; (b) ranking affects competitive performance; and (c) the interaction between similarity and ranking affects competitive performance.

Method

Participants

Convenience sampling was used to recruit 120 introductory psychology students (41 males; 79 females) at the University of the Philippines Diliman. Their ages ranged from 16 to 26, with an average of 18.41 ($SD = 1.69$). Compensation was provided via credit stubs, with which participants used to fulfill their class requirements.

Experimental Set-up

Three experimenters were stationed inside the testing venue; one serving as the game master, one as the timekeeper, and one as the competitor. A physical barrier separated the participant and competitor in order to control for social category fault lines (e.g.

gender, ethnicity, affiliation, etc.) that may influence the performance of the participant.

Two boxes labeled “1” and “2” respectively were on the table before the participant. In between the two boxes, an iPad containing video instructions was placed. Under each box was a different game set-up. Underneath the first box was the following set-up: a plate containing the unsorted pile of Skittles, and five clear plastic containers into which the pieces of Skittles were to be distributed. The plastic containers were labeled “Red”, “Orange”, “Yellow”, “Green”, and “Violet” respectively.

On the other hand, underneath the box for the second game was the following set-up: a line of six plastic cups containing water, and a basin where the water from the cups were to be poured. An extra plastic cup was labeled as the “Practice Cup” to be used for the practice round before the game. The competitor on the other side of the barrier had a similar set-up.

Procedure

The experiment was conducted using a 2 (similar or dissimilar) x 3 (undisclosed, top, or bottom) between-subjects factorial design. Participants were assigned to one of 6 treatment conditions via block randomization (Appx. B).

After obtaining informed consent, participants were asked to answer the questionnaire. An “Additional Experiment Time” form was also included along with the consent form (Appx. D) to accomplish this. According to this form, their efforts would be compensated with extra credit stubs should they choose to go through. With the *Additional Experiment Time* form given along with the informed consent, the participant was led to believe that the unseen competitor was a previous participant who volunteered to partake in the experiment once more in exchange for extra credit stubs.

Before entering the testing venue, the participant was asked to complete a questionnaire that would establish his or her similarity with the competitor. The questionnaire included 20 items that prompted the participants to choose between two options to measure their general opinions related to the games that they played later on. This was later used to establish similarity between the two competitors.

Once all forms were completed, the participant was led inside the room and asked to stand in front of a table where the two boxes containing the games were placed. The view beyond the table was obscured by the barrier. On the other side of which, the competitor was stationed.

To keep the participant from getting suspicious of the cover story and to make the competition believable, the timekeeper appeared to time the performance of the competitor. The timekeeper also assisted the participant during the experiment (i.e. removing the boxes to reveal the set-ups, retrieving fallen cups), while the game master pretended to assist the competitor. A fourth experimenter remained outside the room to entertain the next participant and to ensure silence in the corridor while the experiment was going on.

After telling the participants that they would be competing in two games against an experiment volunteer, the game master reported the pair's similarity rating based on the questionnaires they previously filled out. This was rigged according to the treatment condition assigned to each participant. Competitors were either told that they share 18 out of 20 (90%) similar answers with the competitor for the similar condition or that they only have 2 out of 20 (10%) similar answers for the dissimilar condition.

Before the start of each game, the competitors were asked to clap their hands twice to indicate that they are ready to begin. This was primarily done to convince the participants that there was another person behind the barrier. The facilitators would then lift the appropriate box, revealing the materials to be used. Next, the participants were requested to watch the prepared instruction video for each game, after which they were given a single practice round to familiarize themselves with the game. The experiment required the use of motor-based games as tasks involving motor performance lead to more competitive behavior (Stanne et al., 1999).

Separation Anxiety. The participants were first asked to participate in "Separation Anxiety", a game wherein participants were presented with an unsorted pile of candies, then were asked to sort them by color into the corresponding plastic container. Participants were to use only one hand throughout the game, with their other hand placed behind their back.

The results of the game would supposedly determine the initial rankings of the two competitors out of 24 participants, who allegedly participated in the pilot study of the experiment beforehand. However, the results of the game did not matter as rankings were rigged depending on the treatment condition assigned to the participant. Rankings were then either reported or not reported to the competitors (Appx. C).

The factor of ranking was subdivided into three levels, namely, *undisclosed*, *top* and *bottom*. The participants in the "undisclosed" condition, he or she was told that his or her rank will be disclosed only after finishing the second game, though this was never carried out; a participant in the "top" condition was told that both he or she and a competitor's ranks fall within the Top 2 of the previously-tested pilot group; while a participant in the "bottom" condition was told that both he or she and a competitor's ranks fall within the Bottom 2 of the previously-tested pilot group. Furthermore, it has been noted that competitive comparison is elicited to an optimal level when individuals must be aware that their performance is inferior to that of their competitors (Dakin & Arrowood, 1981). Thus, the confederate was always a rank higher than the participant in both the "top" and "bottom" conditions.

Flip Cup. Following "Separation Anxiety", the participants were then tasked to participate in the next game called "Flip Cup". The mechanics of the game were to empty a cup of water into the basin, then to flip the cup in such a way that it makes a 180° rotation (i.e. upside down to right-side up), and to move on to the next cup until all cups have been successfully emptied and flipped.

To further ensure that the participants would not see their competitor, the facilitators were tasked to pick up any accidentally-dropped cup. Participants were told that whoever completes the task first will be declared the winner. This was done to allow

for longer time measurements for better comparison of competitive performance, as measured by the duration of time taken to complete the task.

Time was recorded as soon as the game master gave the signal to begin. Time recording stopped when the participants finished flipping all six cups. Only the results from the second game were considered for measuring competitive performance, while the first game was used only to establish ranking.

After “Flip Cup”, the game master gave the participants a manipulation check, which prompted them to recall (a) whether they were similar to the competitor and (b) their rank (undisclosed, higher, lower). They were also asked if they were color blind or afflicted with any motor disability that may have affected their performance in the games. The participants were then debriefed and compensated.

Results

The results of the experiment were analyzed using SPSS ver. 23. A two-way analysis of variance (ANOVA, $\alpha = .05$) was used in order to determine the main effects of the factors as well as the interactions between them. Only the data obtained from the second game (“Flip Cup”) was considered in the analysis.

The results of this experiment failed to provide significant statistical evidence for the effects of similarity and ranking on competitiveness. The main effect of similarity bordered on being significant but still failed to reach the desired level, $F(1,114) = 3.81$, $p = .054$, $\eta^2 = .032$. Participants from the dissimilar condition ($M = 0.92$, $SD = 0.70$) outperformed those in the similar condition ($M = 1.15$, $SD = 0.58$) and, therefore, were more competitive.

The calculated main effect of ranking was likewise determined to be nonsignificant, $F(2,144) = 0.43$, $p = .65$, $\eta^2 = .007$. Those who were told that they ranked at the bottom of the supposed previously-ranked pilot test group were found to be the most competitive among the three conditions ($M = 0.96$, $SD = 0.54$), followed by the participants who were ranked at the top ($M = 1.06$, $SD = 0.67$). Finally, the least competitive participants came from the undisclosed condition ($M = 1.09$, $SD = 0.74$).

Lastly, the interaction between the two factors was not significant, $F(2,114) = 1.54$, $p = .22$, $\eta^2 = .026$. The following interactions were observed and ranked from most competitive to least competitive: dissimilar-bottom ($M = 0.70$, $SD = 0.39$), dissimilar-top ($M = 1.00$, $SD = 0.80$), dissimilar-undisclosed ($M = 1.06$, $SD = 0.79$), similar-top ($M = 1.11$, $SD = 0.52$), similar-undisclosed ($M = 1.12$, $SD = 0.70$), similar-bottom ($M = 1.22$, $SD = 0.55$)

Discussion

Contrary to any of the posited hypotheses, the main effects of similarity and ranking and their interaction were not statistically significant. Furthermore, participants who believed that they were dissimilar from their competitor were more competitive than those who thought they were similar. Participants ranked at the bottom were also the most competitive of the three conditions. They were followed by those in the top-ranked condition and those in the undisclosed rank condition. Finally, participants in

the dissimilar-bottom condition were the fastest and, therefore, the most competitive among all treatment conditions. This was followed by those in the dissimilar-top, dissimilar-undisclosed, similar-top, similar-undisclosed, and similar-bottom conditions.

Similarity

The present study aimed to determine whether similarity of value-based opinions influence competitive behavior of Filipino college students since it has been found to effectively induce social comparison (Goethals & Darley, 1977, as cited in Suls & Wheeler, 2000). While, similarity produced a marginally significant impact on competitive performance, such results were ultimately deemed to be non-significant to prevent committing a Type I error (Pritschet, Powell, & Horne, 2016).

The contrast between the results of the current study and the framework of Garcia and colleagues (2013) may be attributed to cultural relativism. The research on the social comparison model of competition is primarily based on a Western, individualistic perspective whereas Filipinos have a collectivist culture. Competition in individualist cultures occur between individuals while competition tends to occur between groups in collectivist cultures (Triandis et al., 1988). When faced with situations in which individual and collective interests are conflicting, persons with collectivist backgrounds are also more inclined to cooperate than compete. The opposite is true for those coming from societies where individualism is emphasized (Parks & Vu, 1994). Although the social comparison model is based on empirical evidence which have been rigorously tested, some of its claims, particularly that greater similarity between individuals encourages competitive behavior, may not be applicable to collectivist cultures such as that of the Filipinos. Though the results of the study contradict the said model, it may support observations that when rankings remain undisclosed, people's desire to win (i.e., their competitiveness) tends to be overpowered by the desire to know more about their competitor if they know that they are similar to them in a particular domain (Wood, 1989).

Moreover, the failure of similarity to establish a significant effect on competitive performance is consistent with the findings that although people choose to compare themselves to others who share the same values as their own, they also draw more support from such similar individuals (Goethals & Darley, 1977, as cited in Suls & Wheeler, 2000). That is, they experience more social support from those with identical values. Indeed, according to Deutsch (2006), competition involves decreased perceived similarity of values among competitors and increased awareness of conflicting interests. On the other hand, increase in perceived similarity produces and is produced by cooperation. That is, when people are aware that they share the same values and beliefs, there is a possibility of developing a positive affinity among themselves.

The differing role of similarity in competition and cooperation may also explain why participants in the dissimilar condition performed faster and thus more competitively than those in the similar condition. Since the similarity rating between the participants and their competitor was reported prior to the commencement of the games, it must have been salient enough to trigger a distinct type of social relationship. That is, competition was incited among those who thought they were only 10 percent similar

to their competitors. On the other hand, subtle feelings of cooperation might have fostered among those who believed that they shared 90 percent of their values with their competitor.

These propositions are made even more probable when one contextualizes the data against the backdrop of Filipino culture, specifically with the *Sikolohiyang Pilipino* (Filipino Psychology) concept of *Ibang-Tao* (others) and *Hindi-Ibang-Tao* (one of us) dichotomy. The two constructs are subsumed under the concept of *kapwa* (shared identity) (Enriquez, 1992, as cited in Yacat, 2013). In the process of social interaction, Filipinos tend to identify people as either *Ibang-Tao* or *Hindi-Ibang-Tao* (Pe-Pua & Protacio-Marcelino, 2000). It is possible that after finding out they shared the same values as their competitor, the participants viewed their competitor as *Hindi-Ibang-Tao*. By thinking that they have a sense of shared identity with their competitor, a strong feeling of competitiveness was not induced among the participants in the similar condition. Thus, competing against people with dissimilar values elicited stronger feelings of competitiveness than when competing against similar opponents because the former involves a low sense of perceived relatedness with the other person.

Ranking

The lack of statistical significance of ranking may be explained by a distinction between two upward social comparison conditions: upward social comparison in the task and upward social comparison on the scale (Garcia & Tor, 2007). Task comparisons are made based on a single specific action, whereas scale comparisons pertain to a general view of an individual's overall performance. Although task and scale comparisons are correlated, competitive behavior is not as strongly induced when there is no possibility of a rival surpassing one's rank. Though the supposed ranks of the participant and confederate were disclosed after the first game, it was explained at the outset that winning was based on the performance on the two games alone. Also, the rigged ranking was independent of the second game. Therefore, only task comparison was available to the participants.

Furthermore, Garcia and his colleagues (2006) emphasized that upward social comparison could only heighten people's competitiveness if the domain where they lost is deemed important to the self. Winning in the games might not have been important to them since they would be given credit stubs as compensation regardless of their performance in the games, thus explaining why the main effect of ranking was not statistically significant. Perhaps if participants were competing in a more valued area, ranking would have a significant effect on competitive behavior.

Participants also performed better when they were ranked at the bottom than if their ranks were at the top or were undisclosed. This suggests that Filipinos, like the Japanese, as noted by Heine and his colleagues (2001), are more likely to work harder in the face of failure than after attaining success. That being said, further studies are needed to be able to conclude that Asians, unlike Westerners, are more motivated in accomplishing tasks after experiencing failure.

It is also probable that participants in the top ranking condition were not as competitive as those in the bottom because collectivists have low self-enhancement levels, which is mediated by modesty being a social requirement in their culture

(Kurman, 2003). In relation to this, Filipinos have a concept of *hiya*, which refers to a “kind of conscious self-control or restraint (something similar to temperance)” (Lasquety-Reyes, 2016, p. 66). *Hiya* was further described by Pe-Pua and Protacio-Marcelino (2000) as a sense of propriety. Similar to other collectivist cultures, there exists a norm in the Philippines to practice modesty, or more appropriately *hiya*, that mediates low self-enhancement.

On the other hand, since ranking induces upward social comparison as well as the unidirectional drive upward in an individual (Garcia et al., 2006), non-disclosure of one's rank relative to others failed to trigger these two important factors. Thus, participants in the undisclosed condition performed least competitively.

Interaction effect

The study failed to provide support that the interaction between similarity of values and ranking significantly affects competitive performance. This suggests that though individual factors (e.g. similarity) and situational factors (e.g. ranking/proximity to a standard) influence competitiveness, they operate distinctly. Individual factors focus on the actor's perception of the competitor and performance dimension rather than the specific context of the competition. The opposite is true for situational factors (Garcia et al., 2013).

On the other hand, self-handicapping may explain why participants in the similar-bottom condition performed slower than those in the similar-top condition and were even the slowest when compared to all other treatment conditions. Self-handicapping refers to the practice of intentionally undermining one's chances of success to justify potentially poor performance and protect one's self-worth (Ormrod, 2012). As can be observed, participants in the similar-bottom condition performed slower than those in the similar-top condition and were even the slowest when compared to all other treatment conditions. We speculate that this is a result of the self-handicapping of the participants since they may have felt doubly inadequate after finding out they placed at the bottom two of the previously-ranked pilot test group, coupled with having been defeated by their competitor.

Also, because it is probable that people who share similar values experience a feeling of shared identity, participants in the similar-bottom condition may have seen their competitor as their *karamay* or *kadamay*. This Filipino concept comes from the word *damay* which refers to the ability to feel for others, especially in the midst of a dilemma or a crisis (Dela Cruz, 2015; Torres, 1985). More than just a feeling, however, it also moves people to act in ways that would bring the self closer to others (Dela Cruz, 2015). The similar-bottom participants must have felt comforted by the fact that they had a *karamay* in placing last in the ranking and so did not find it necessary to compensate for their low rank. In contrast, the participants in the dissimilar-bottom condition may not have viewed their competitor as a *karamay* because they did not think they share enough values with their competitor. Thus, they were still motivated to outperform their competitor to make up for being ranked last.

Limitations and recommendations

One of the limitations encountered during the research was the restricted time given to the researchers for data collection. Given more time, more participants might have been recruited perhaps causing significant results, especially considering the marginally significant results of the similarity factor.

Additionally, it was observed that some of the participants exhibited difficulty in executing and/or understanding the rules of the “Flip Cup” game used to measure competitiveness. It is possible that this may have led to the non-significant results of the study. This is important since ambiguity of instructions often results in the participants focusing more on performing the task correctly rather than concentrating on the goal of winning, thereby inciting self-consciousness that disrupts their competitive behavior (Martens & Landers, 1972, as cited in Baumeister, 1984). Such is the phenomenon of "choking under pressure" in which a person fails to meet high performance standards set by both the situation and the individual himself (Baumeister, 1984). It often occurs when people are forced to do specific tasks for the first time (Baumeister, 1984). Therefore, using a different game to measure competitiveness may possibly have produced different results. Since “Separation Anxiety” is relatively easier to understand and execute, we noticed that participants were able to focus more on playing competitively than on carrying out the instructions accurately. Hence, we should have chosen this to measure competitiveness rather than “Flip Cup.” Conversely, should future researchers opt to use “Flip Cup” as a procedure for obtaining data, we recommend that they measure perseverance rather than competitiveness.

The researchers of the present study recommend that future researchers design a competitive task that is more relevant to the participants (i.e. something academic-related for students) to induce competitive behavior as dimension relevance is one of the individual factors in the social comparison model of competition (Garcia et al., 2013). Another would be to explore competitive behaviour and attitudes of Filipinos as the literature is lacking. They may expound on the relationship of competitiveness and *kapwa*. It would also be interesting to research on other factors of the social comparison model of competition such as social category fault lines, particularly race, since Filipinos are generally considered warm and hospitable toward foreigners.

There was a failure to probe the participants about how they felt upon learning their similarity rating with their opponent and their ranking in the supposed list of pilot test participants. Researchers, who want to replicate the current study, may ask participants the extent to which they perceived themselves as competitively performing in the tasks via a Likert scale.

Future variations of this study may also have the participants compete with each other instead of with a confederate posing as an experiment volunteer. The gender of participants may also be considered as a possible factor affecting competitive behavior.

Conclusion

The present study aimed to analyze how similarity of values and rankings influence competitiveness. The results failed to provide evidence that the main effects of either of the two factors, as well as their interaction, had a significant effect on competitive behavior. Nevertheless, the study somehow shed light on the attitudes of Filipino students in the face of competition and how the interplay of subjective and cultural values and situational factors shape their behavior. It was noted that when Filipinos compete against people who do not share the same values as them, stronger feelings of competitiveness are induced than when they are confronted with similar opponents because the former involves a low sense of perceived relatedness with the other person. Furthermore, with participants having performed better when ranked at the bottom, it may be inferred that, for Filipinos, being at the bottom provides room for improvement .

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Appendix A

PN:

QUESTIONNAIRE

Which of the two options do you prefer? Write A or B in the space provided. Don't spend too much time on any one item.

A	B	Ans
Sweet	Sour	
Milk	Orange Juice	
Candies	Chocolates	
Play alone	Play with others	
Bright colors	Pastel Colors	
Angry Birds	Candy Crush	
Jogging	Playing video games	
Coffee	Tea	
Red	Blue	
Twister	Checkers	
Crossword	Sudoku	
Milkshake	Milk Tea	
Monopoly	Snakes & Ladders	
McDonald's McFloat	Jollibee's Coke Float	
Rubik's Cube	Tetris	
ROYGBIV	Black & White	
M&M	Nips	
Coca-Cola	Pepsi	
Green	Yellow	
Scrabble	Chess	

Questionnaire that will measure similarity between competitors. Participant number (PN) is indicated at the upper-left.

Appendix B

B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B1 0	B1 1	B1 2	B1 3	B1 4	B1 5	B1 6	B1 7	B1 8	B1 9	B2 0
1	2	2	6	3	1	5	4	4	2	3	2	5	1	6	4	5	3	1	5
6	6	6	1	2	5	3	5	5	5	5	3	2	2	1	2	4	6	6	6
4	3	4	2	4	3	1	6	2	3	6	4	4	3	3	6	1	4	3	3
3	4	5	4	1	4	2	1	3	6	2	1	3	6	4	1	6	2	5	1
5	5	3	3	5	3	6	3	1	1	4	6	6	4	2	5	2	1	4	2
2	1	1	5	6	2	4	2	6	4	1	5	1	5	5	3	3	5	2	4

Assignment of treatment conditions via block randomization

Appendix C

In the following lines, Participant A would refer to the competitor (confederate). Participant B would refer to the participant.

Similar-Unspecified

- 90% similar
- “Thank you for participating. Your individual rankings and the player who performed faster shall be announced after the second game.”

Similar-Top

- 90% similar
- “Thank you for participating. Based on both your performances, Participant A performed better than Participant B. Ranked by speed, the both of you are respectively #1 and #2 out of 24 pilot test participants.”

Similar-Lower

- 90% similar
- “Thank you for participating. Based on both your performances, Participant A performed better than Participant B. Ranked by speed, the both of you are respectively #23 and #24 out of 24 pilot test participants.”

Dissimilar-Bottom

10% similar

“Thank you for participating. Your individual rankings and the player who performed faster shall be announced after the second game.”

Dissimilar-Top

- 10% similar
- “Thank you for participating. Based on both your performances, Participant A performed better than Participant B. Ranked by speed, the both of you are respectively #1 and #2 out of 24 pilot test participants.”

Dissimilar-Bottom

- 10% similar
- “Thank you for participating. Based on both your performances, Participant A performed better than Participant B. Ranked by speed, the both of you are respectively #23 and #24 out of 24 pilot test participants.”

Appendix D

ADDITIONAL EXPERIMENT TIME

The experimenters will provide additional CREDIT STUBS for participants who choose to volunteer additional time for this experiment. Volunteers will participate in the same two games that he or she had participated in during his or her original time slot.

If you are interested in volunteering more time for this study, please check the box below and provide your cell phone number. Experimenters will contact you within 24 hours to arrange a volunteer schedule that will suit you.

YES, I would like to volunteer more time for this experiment.

Cellphone:

The Additional Experiment Time form that is presented with the informed consent form. This form will reinforce the cover story made for the participant's competitor.

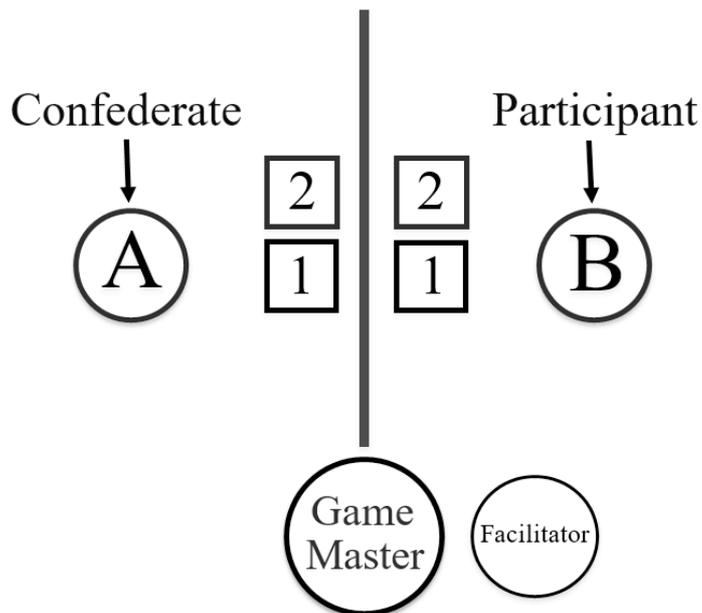
Appendix E

Fig. 2 The room will be setup in such a way that there will be a barrier at the center to conceal the participant's opponent (confederate). At each side of the barrier, two boxes labelled "1" and "2" will be placed on a table where the materials of each game are hidden underneath. The game master will be standing at one end of the barrier facing the competitors. Beside him or her will be the facilitator.

The Factors Promoting the Systematization of the PDCA Cycle in Student Support Systems: Special Needs Education in Japan

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Abstract

Since 2007, Japanese public schools have established student support systems. However, earlier studies have shown that coordinators—the key persons who promote these systems in schools—lack the required knowledge, skills, and time. Furthermore, they face challenges in obtaining the cooperation of teachers. Consequently, student support systems are not functioning as well as intended. Using a “PDCA cycle promoting sheet,” Matsumoto (2016) showed that holding school committee meetings more regularly is an effective means of making school systems more systematic. In this study, we analyzed the same data as Matsumoto (2016) to clarify the additional factors that make student support systems more systematic. The completed sheets highlighted both the weak and strong points of student support systems from two perspectives, namely: the cycle itself and the process of sharing information. Study participants comprised 50 coordinators, 24 elementary schools, and 26 junior high school in Japan. We found significant difference in the results of the PDCA cycle promoting sheet between coordinators ensuring good cooperation and those facing difficulties in cooperation, as well as between individual and team coordinators. The results revealed that coordinator’s working in a team will promote the PDCA cycle of the student support systems, while the experience as a coordinator will not. In addition to the need for the principal to show that a basic policy for special needs is one the pillars of the school management plan, we recommended that they appoint more than two coordinators in their school.

Keywords: PDCA Cycle, Special Needs Education Coordinator, Student Support System

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Introduction

In 2007, the Japanese Ministry of Education, Culture, Sports, Science, and Technology issued a notice regarding the need for special needs education in the country's schools. In the decade since, all public schools have established a student support system (Ministry of Education, Culture, Sports, Science and Technology Japan, 2017b) that they now seek to enrich. As the key persons promoting this system in each school, special needs coordinators have six major tasks in addition to their regular daily teaching work. These are: a) running a school committee supporting special education, b) formulating an "Individual Education Support Plan," c) developing an "Individualized Education Plan," d) planning in-school teachers' training, e) enlightening parents about special needs education, and f) cooperating with external experts.

To make up for the coordinator's lack of knowledge and skills, each local government has been holding coordinator training and sending itinerant school consultants to each school. For example, in Suginami-Ward—located in west Tokyo—the educational committee provides a coordinators training course comprised of three levels of training for coordinators according to their experience: one year, two to four years, and more than five years (Tamura, 2012). They also have an itinerant school consultants team composed of a psychologist and retired school principal (Nakamura, 2012). However, previous studies show that coordinators lack the knowledge, skills, and time needed to serve effectively; and that they face challenges in gaining cooperation among teachers (Matsumoto 2012; Miyaki & Kifune 2011). Consequently, student support systems are not functioning as well as intended.

Even if the coordinator works effectively, support for children with special needs might be cut off when a coordinator transfers or retires. As such, the student support system must function systematically, without depending on the ability of the individual coordinator. Accordingly, the leadership of the school principals is most necessary. They must provide a basic policy for special needs education as one of the pillars of the school management plan (school management policies) (Ministry of Education, Culture, Sports, Science and Technology Japan, 2017a) to actualize a whole school approach to the student support system.

In 96% of public schools in Japan, school management is based on the Plan-Do-Check-Act (PDCA) cycle (Ministry of Education, Culture, Sports, Science and Technology Japan, 2016). The PDCA cycle is a method intended to continuously improve an organization. It teaches entities to plan an action according to the research, implement it, check the results compared to the plan, and act on what has been learned. Matsumoto (2016) made a tool to aid coordinator's in improving the PDCA cycle of the student support system: a PDCA cycle promoting sheet (Figure 1).

The PDCA cycle promoting sheet comprises six questions on a coordinator's major tasks. Each question has five parts, one for each stage of the PDCA cycle: Research, Plan, Do, Check, and Act. The coordinators complete this sheet by scoring the person working on a task or with whom they are sharing information. For example: not working: 0 point (undone); the person in charge alone: 1 point; the person in charge plus other teachers: 2 points (individual level); a small group: 3 points; and the whole school: 4 points (system level). The completed PDCA Cycle Promoting Sheet

highlights both the weak and strong points of student support systems from two perspectives, namely the cycle itself and the process of sharing information.

Using this PDCA cycle promoting sheet in their survey, Matsumoto (2016) concluded that holding a school committee regularly will enable student support systems to become more systematic. Tanaka and Okuzumi (2014) also reported that the regularization of the school committee deepens the teacher’s understanding of special support education. However, there are no other studies evidencing what can promote the systematic management of the student support systems. In this study, we analyze the same data as Matsumoto (2016) to clarify additional factors that make student support systems more systematic.

Method

While this study used the same data as Matsumoto (2016), its analysis focused on different parts of the data. More specifically, in this study we analyzed the relationship between the results of the PDCA cycle promoting sheet and the coordinator’s careers and their working environment.

Participants. The participants in this study comprised 50 coordinators, 24 elementary schools, and 26 junior high schools in Japan.

Materials. The PDCA Cycle Promoting Sheet (Matsumoto, 2016), shown in Figure 1, and a questionnaire on the profiles of the coordinators and the schools where they work.

PDCA Cycle Promoting Sheet				School Name	First Date	Name																								
This sheet will help you confirm the process of implementing a student support system for the special needs education at your school. Please answer the questions below.				Name	Second Date	Name																								
<p>I First, please answer questions about the entire school’s approach to special needs education at your school. Read 1) to 5) and respond yes or no.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">1) The school principal has stated a policy for the special needs education in the educational plan.</td> <td style="width: 50%;"></td> </tr> <tr> <td>2) A school committee is organized in the annual plan and is meets regularly.</td> <td></td> </tr> <tr> <td>3) A small group class or a class taught by many teachers has been developed.</td> <td></td> </tr> <tr> <td>4) Exchanges are conducted in Activities and Collaborative Learning with students in special needs education classes or in the special needs education school.</td> <td></td> </tr> <tr> <td>5) A small class in which children can receive special instruction anytime when needed has been created.</td> <td></td> </tr> </table>							1) The school principal has stated a policy for the special needs education in the educational plan.		2) A school committee is organized in the annual plan and is meets regularly.		3) A small group class or a class taught by many teachers has been developed.		4) Exchanges are conducted in Activities and Collaborative Learning with students in special needs education classes or in the special needs education school.		5) A small class in which children can receive special instruction anytime when needed has been created.															
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<p>Q2 Formulating an Individualized Education Support Plan child and his or her parents. It is a tool to support children from infancy to school graduation, through cooperation among entities that provide education, health, medical services, and welfare.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 60%;"></td> <td style="width: 10%;">First</td> <td style="width: 10%;">second</td> </tr> <tr> <td>Research</td> <td>Know all children who need the Individualized Education Support Plan</td> <td>points</td> <td>points</td> </tr> <tr> <td>Plan</td> <td>Hold a support meeting to design the Individualized Education Support Plan with parents</td> <td>points</td> <td>points</td> </tr> <tr> <td>Do</td> <td>Use the Individualized Education Support Plans when designing the individualized teaching plan</td> <td>points</td> <td>points</td> </tr> <tr> <td>Check</td> <td>Hold a support meeting with parents and confirm the support progress and results as provided outside of school</td> <td>points</td> <td>points</td> </tr> <tr> <td>Act</td> <td>Hold a support meeting with parents and revise the Individualized Education Support Plan</td> <td>points</td> <td>points</td> </tr> </table>									First	second	Research	Know all children who need the Individualized Education Support Plan	points	points	Plan	Hold a support meeting to design the Individualized Education Support Plan with parents	points	points	Do	Use the Individualized Education Support Plans when designing the individualized teaching plan	points	points	Check	Hold a support meeting with parents and confirm the support progress and results as provided outside of school	points	points	Act	Hold a support meeting with parents and revise the Individualized Education Support Plan	points	points
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<p>Q4 Planning in-school teachers’ training on the special needs education In-school teachers’ training is needed to refresh teachers’ understandings of special needs education and teaching skills.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 60%;"></td> <td style="width: 10%;">First</td> <td style="width: 10%;">Second</td> </tr> <tr> <td>Research</td> <td>Confirm the teacher’s needs to hold teacher’s training on special needs education</td> <td>points</td> <td>points</td> </tr> <tr> <td>Plan</td> <td>Plan teacher’s training on special needs education according to the confirmed needs</td> <td>points</td> <td>points</td> </tr> <tr> <td>Do</td> <td>Hold teacher’s training on special needs education</td> <td>points</td> <td>points</td> </tr> <tr> <td>Check</td> <td>Confirm outcomes of the teacher’s training on the special needs education</td> <td>points</td> <td>points</td> </tr> <tr> <td>Act</td> <td>Plan an improved teacher’s training</td> <td>points</td> <td>points</td> </tr> </table>									First	Second	Research	Confirm the teacher’s needs to hold teacher’s training on special needs education	points	points	Plan	Plan teacher’s training on special needs education according to the confirmed needs	points	points	Do	Hold teacher’s training on special needs education	points	points	Check	Confirm outcomes of the teacher’s training on the special needs education	points	points	Act	Plan an improved teacher’s training	points	points
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<p>Q5 Make parents aware of special needs education All parents are enlightened on special needs education, through newsletters or parent-teacher conference as needed.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 60%;"></td> <td style="width: 10%;">First</td> <td style="width: 10%;">second</td> </tr> <tr> <td>Research</td> <td>Confirm that all parents have information on special education that they need to know</td> <td>points</td> <td>points</td> </tr> <tr> <td>Plan</td> <td>Plan events for all parents to enlighten them on special needs education</td> <td>points</td> <td>points</td> </tr> <tr> <td>Do</td> <td>Execute planned events for all parents to enlighten them on special needs education</td> <td>points</td> <td>points</td> </tr> <tr> <td>Check</td> <td>Confirm the outcomes of activities to enlighten all parents</td> <td>points</td> <td>points</td> </tr> <tr> <td>Act</td> <td>Plan improved activities to enlighten all parents</td> <td>points</td> <td>points</td> </tr> </table>									First	second	Research	Confirm that all parents have information on special education that they need to know	points	points	Plan	Plan events for all parents to enlighten them on special needs education	points	points	Do	Execute planned events for all parents to enlighten them on special needs education	points	points	Check	Confirm the outcomes of activities to enlighten all parents	points	points	Act	Plan improved activities to enlighten all parents	points	points
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<p>Q6 Collaboration with external experts To provide the proper educational support and cooperation with external experts as needed.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 60%;"></td> <td style="width: 10%;">First</td> <td style="width: 10%;">second</td> </tr> <tr> <td>Research</td> <td>Know all external experts with whom to cooperate</td> <td>points</td> <td>points</td> </tr> <tr> <td>Plan</td> <td>Plan cooperation with external experts, such as consultation or holding a meeting</td> <td>points</td> <td>points</td> </tr> <tr> <td>Do</td> <td>Improve methods to support children or the student support system itself according to advice from external experts</td> <td>points</td> <td>points</td> </tr> <tr> <td>Check</td> <td>Confirm the process or the outcomes from cooperating with external experts</td> <td>points</td> <td>points</td> </tr> <tr> <td>Act</td> <td>Plan improved cooperation with external experts</td> <td>points</td> <td>points</td> </tr> </table>									First	second	Research	Know all external experts with whom to cooperate	points	points	Plan	Plan cooperation with external experts, such as consultation or holding a meeting	points	points	Do	Improve methods to support children or the student support system itself according to advice from external experts	points	points	Check	Confirm the process or the outcomes from cooperating with external experts	points	points	Act	Plan improved cooperation with external experts	points	points
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Figure 1 Picture of the PDCA Cycle Promoting Sheet (Matsumoto, 2016)

Procedure.

We sent a request letters that mentioned the URL and password to download the excel files of the questionnaire to both elementary and junior high schools by post. We collected the excel files from schools online by means of dropbox or by email. We asked the coordinators of each school to complete the questionnaire and to answer the “PDCA cycle promoting sheet (Matsumoto, 2016)”.

Analyze.

Excel Statistics ver.2.14 (BellCurve, JAPAN) was used to perform all the statistical analyses. A *t*-test was performed to analyze all data.

Results

Profiles of the participants.

Participant profiles are shown in Table 1. Answers were obtained from all areas in Japan. Half of the schools in which the respondents work have between 200–500 children. Approximately 60% of the elementary schools hold school committees once or twice a month. Approximately 60% of participants were over the age of 50, while 74% had more than 20 years of experience as a teacher.

Table 1: *The profiles of the participants and their Schools*

	Elementary School (N=24)	Junior high school (N=26)	Total (N=50)
School information			
District			
Hokkaido/Tohoku	6 (25%)	1 (4%)	7 (14%)
Kanto	7 (30%)	6 (23%)	13 (26%)
Chubu	4 (18%)	3 (12%)	7 (14%)
Kinki	2 (8%)	1 (4%)	3 (6%)
Chugoku	1 (4%)	6 (23%)	7 (14%)
Shikoku	2 (8%)	4 (15%)	6 (12%)
Kyusyu/Okinawa	2 (8%)	5 (19%)	7 (14%)
Number of children			
Less than 200	5 (21%)	6 (23%)	11 (22%)
Within 200-500	8 (33%)	13 (50%)	21 (46%)
Over 500	11 (46%)	7 (27%)	18 (36%)
Frequency of holding school committee			
Once a week	0 (0%)	5 (19%)	5 (10%)
Twice a month	1 (4%)	0 (0%)	1 (2%)
Once a month	14 (58%)	5 (19%)	19 (38%)
Once a semester	6 (25%)	12 (46%)	18 (36%)
Only when necessary	3 (13%)	4 (16%)	7 (14%)

Profile of the participants

Age

Twenties	2 (8%)	2 (8%)	4 (8%)
Thirties	1 (4%)	3 (11%)	4 (8%)
Forties	5 (21%)	7 (27%)	12 (24%)
Fifties	16 (67%)	14 (54%)	30 (60%)

Teacher experience

Under 10 years	4 (16%)	5 (18%)	9 (18%)
10-19 years	3 (13%)	1 (4%)	4 (8%)
20-29 years	11 (46%)	10 (38%)	21 (42%)
Over 30 years	6 (25%)	10 (38%)	16 (32%)

Impact of the coordinator's conditions on their difficulty in cooperation with other teachers.

The difference between the two groups, namely those having (1) difficulty in cooperation or (2) good cooperation with other teachers, is illustrated in Table 2. According to the *t*-test, there are no significant difference between group (1) and (2) in all three questions regarding respondent careers and their working environment: the experience as both coordinators ($t(48)=0.51$, n.s.) and teachers ($t(48)=0.04$, n.s.), the number of coordinators in one school ($t(48)=0.26$, n.s.).

Table 2 The impact of the coordinator's conditions on their difficulty in cooperation with other teachers

	(1) Difficuly in cooperation (N=17)		(2) Good cooperation (N=32)		T-value
	Average	SD	Average	SD	
Experience as a coordinator	4.06	0.66	3.64	0.49	0.51 n.s.
Experience as a teacher	23.65	1.85	23.52	2.05	0.04 n.s.
Number of the coordinators per school	1.64	0.15	1.71	0.22	0.26 n.s.

Effect of the coordinator's having difficulty in cooperation with other teachers on the PDCA cycle.

Figure 2 shows the difference in the PDCA cycle between coordinators working in groups having (1) difficulty in cooperation and (2) good cooperation. According to the *t*-test, the mean value of coordinators ensuring good cooperation is higher than that of those facing difficulties in cooperation. The difference are shown in Research ($t(48)=2.40$, $p<.05$), Do ($t(48)=2.16$, $p<.05$) and Check ($t(48)=2.22$, $p<.05$) stages alone.

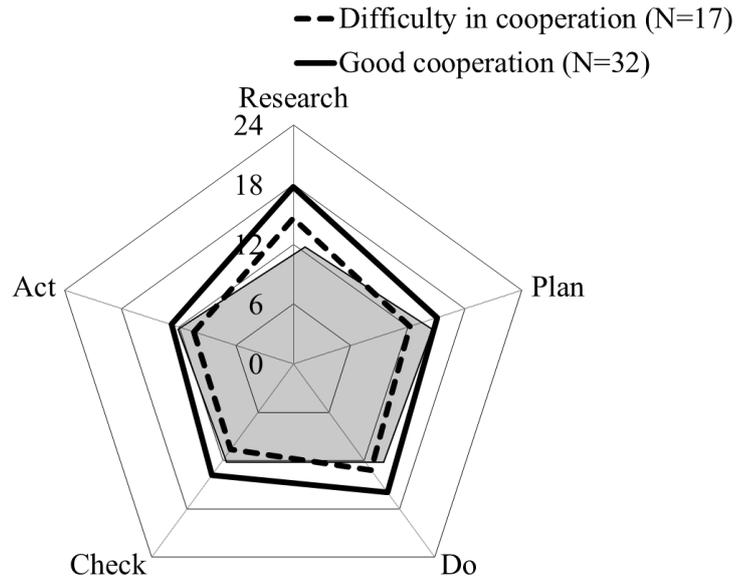


Figure 2 The difference in mean values according to the existence of difficulties in cooperation of coordinators

※ The gray pentagon depicts the individual level.

Effect of the experience as a coordinator on the PDCA cycle.

Figure 3 shows the difference between coordinators in groups having (3) within two years or (4) more than five years of experience as a coordinator, in addition to the more than 20 years of experience as a teacher. There is no difference between the mean value of the group (3) and (4) at any stages of the PDCA cycle.

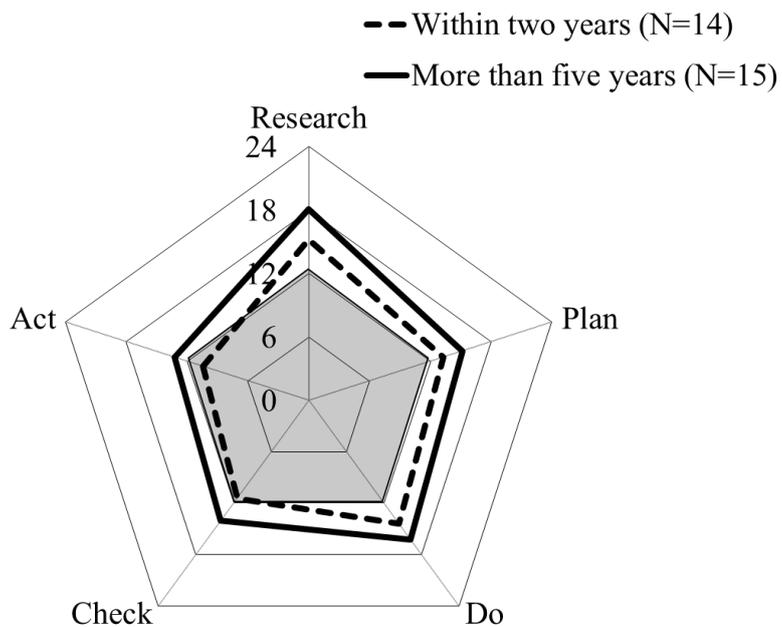


Figure 3 The difference in mean values according to the experience of coordinators

※ The gray pentagon depicts the individual level.

Effects of the number of coordinators on the PDCA cycle.

Figure 4 shows the difference of the PDCA cycle between coordinators working individually and as a team. The mean value of team coordinators is higher than that of individual coordinators. The difference are shown in Plan ($t(48)=3.35$, $p<.05$), Do ($t(48)=2.88$, $p<.05$), Check ($t(48)=2.07$, $p<.05$) stages alone.

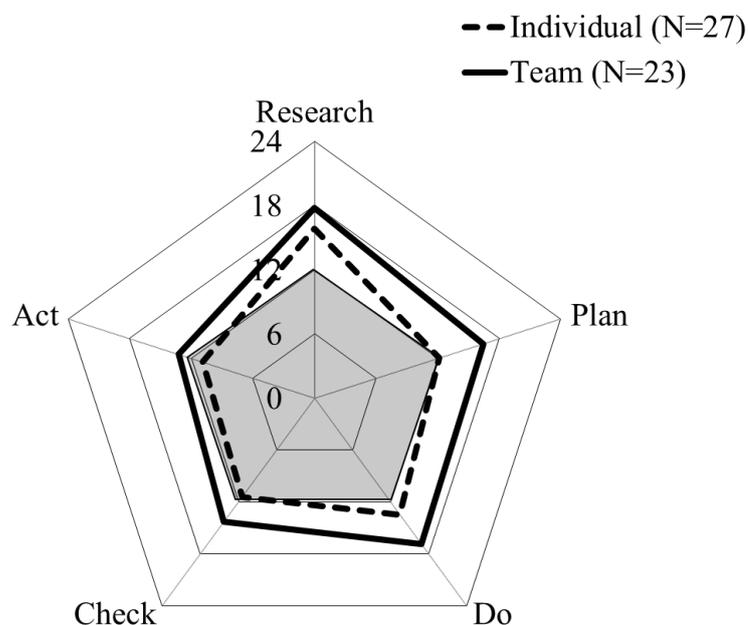


Figure 4 The difference in mean values according to the number of coordinators

※ The gray pentagon depicts the individual level.

Discussion

Rather than the lack of experience or available coordinators, it is the absence of a systematic student support system that causes the difficulty in cooperation between coordinators and teachers. In other words, it is likely that if the student support system is working systematically, then the difficulty in cooperation between coordinators and teachers will be reduced. The results of this study indicate that coordinators feel that they are cooperating well when they share the information (Research) and work (Do), and check the result (Check) in organizational groups. Thus, it is important to set meetings where coordinators can share information with other teachers regularly. This conclusion validates Matsumoto's (2016) report that holding regular school committee meetings will enable student support systems to become more systematic

However, experience as a teacher and coordinator will not affect the systematic PDCA cycle of the student support system, nor will the coordinator's degree of experience. Miyaki and Kifune (2011) have shown that coordinators with less experience have more difficulty than those with ample experience. However, we did not observe this difference in our survey. Nonetheless, experience as a coordinator does not reduce the difficulty in cooperation with other teachers.

The results show that while being a team will not reduce coordinator's facing

difficulty in cooperating with other teachers, it will improve the student support system by making it more systematic—especially in the Plan, Do, and Check stages. If the coordinator works individually, then they can just do when they want. If they work in a team, however, they must negotiate with one other and plan before they act. The coordinator team will spontaneously lead the student support system in a more systematic manner.

We suggest that school principals appoint a minimum of two coordinators in their schools. The results revealed that holding a school committee meeting on a regular basis (Matsumoto, 2016) and having coordinators work in a team will promote the PDCA cycle of the student support systems, but that coordinator experience will not. This means that improving the organization is an effective means of making the student support system more systematic and reducing the difficulty that coordinators face. As such, we recommend that the school principal appoint more than two coordinators per school in addition to evidencing a basic policy for special needs education as one of the pillars of the school management plan.

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Effect of Sequential Storytelling Program on Executive Functions of Preschoolers

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Official Conference Proceedings

Abstract

The brain capacity in life management or Executive Functions is an important feature necessary for every step of living in a modern society. According to the Thai children survey, it is found that most of children in Thailand have a deficiency of this ability. Consequently, this research aims to study the effect of Sequential Storytelling Program on Executive Functions of preschooler. The samples are 24 boys and girls studying in 3rd year Kindergarten of Thawsi School, Bangkok including 12 children as an experimental group, and 12 children as a controlled group. The methods used in this study are Sequential Storytelling Program and the Executive Function of preschooler assessment. The result reveals that the Sequential Storytelling Program can develop 4 domains of the Executive Functions in preschooler which are Inhibitory Control, Cognitive Flexibility, Emotional Control, and Planning & Organizing. However, it is found that there is no development of Working Memory domain.

Keywords: Executive functions, Storytelling, Preschoolers

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Introduction

Executive Functions is a vital skill to control emotions, thoughts and actions to express appropriately, including the control of accomplish things set as goals. The advantages of Executive Functions affect to the achievement in every stage of life, both study, work and family. (Diamond, 2012)

However, the development of Executive Functions need to be improved since children are in the kindergarten. According to the research from Harvard University (Harvard University, 2014), it is shown that this ability should be developed since childhood, especially during the age of 3-6 years old due to the fact that children brains are built and developed most in this stage. Moreover, the development can be more effective by focusing on children's learning by doing it themselves. There are 5 domains of the Executive Functions in early childhood which are Working Memory, Inhibitory Control, Shift/Cognitive Flexibility, Emotional Control, Planning & Organizing (Nuanchan Chutabhakdikul, 2014)

Although the Executive Functions are important skill for early childhood, the curriculum and teaching in Thailand focuses on reading and writing development in 0 to 6 years old preschooler more than other skills. (Weraphan Suphanchaimat, 2016) Besides, the study of Executive Functions in 2014 reveals that there were 18.5% of 243 preschoolers aged between 3-6 years old encountering the problem of Inhibitory Control, Working Memory, and Emotional Control. Also, a survey in the year 2015-2016 by Mahidol University and the Health Systems Research Institute, sampling 2,965 children aged between 2-6 years old, found that there were 30% of them had defective behaviors of Inhibitory Control, Working Memory, and Emotional Control. (Mahidol University, the Health Systems Research Institute, and National Research Council Thailand, 2016)

According to the problems mentioned above, it is the reason for researcher to study about activities that can help children to develop their Executive Function. Afterwards, it is found that, there are many activities such as the Using of Computer Program (Lisa &Thorell, 2009 ; Nutley, Söderqvist, Bryde, Thorell, Humphreys, & Klingberg, 2011), the Using of Curriculum (Barnett, Thomas, & Munro, 2007 ; Diamond, 2012), Reading Activity (Supawadee Hanmethee, 2016 ; Day, Connor & McClelland, 2015), Storytelling (Bates, 2012 ; Cavanaugh, Clemence, Teale, Rule& Montgomery, 2016), Imaginary Play, Music for Movement, Quiet Game, Aerobic, Taekwondo, Yoga, and Autogenic Training. (Suphawadee Hanmethee, 2015 ; Harvard university, 2014) However, the researcher did not found the study about the effect of using these activities to develop the 5 domains of Executive Functions. In this study, the researcher focuses on the creating of development program that can develop the 5 domains of the Executive Functions in preschooler.

Storytelling is the one of activities that can develop the Executive Functions in preschooler. The study of Harvard University (Harvard University, 2014) reveals that 3 to 6 years old preschoolers like telling story. The complexity of storytelling will improve many kinds of skills in young children which accord with Piaget's theory of intelligence development. Piaget explained that 2to6-year-old children's development is at the preoperational stage. Children use language as a tool of thoughts and often pick up words to compose new sentence for telling their own story, (Aree

Sanhachawee,2007) by using language and brain to motivate through the design of activities consistent with the principles of learning management which is match with the brain function. The theory of Brain Compatible Learning (Aree Sanhachawee, 2007; Wittayakorn Shiangkool, 2005), and the study of some research and document about activities enhancing executive function mentioned that storytelling and executive function happened together and relate to each other. (Bates, 2012) As a result, the researcher is interested in applying activity of telling story with the Executive Functions development in preschoolers, and furthering the activity by additional conditions and techniques into a sequential storytelling, to create sustainable learning process of children, which is an activity that encourage children to use their experiences, knowledge and imagination for taking turns in telling story sequentially and accordingly. The condition or situation determined to reach the goal of connected narration into one story which is different from the typical storytelling, and able to develop the Executive Functions more inclusively. Due to the fact that the sequential storytelling need more various Executive Functions along the activity.

Research Method

This research was a quasi-experimental research conducted by using experimental plan with controlled group and assess participants by using pretest and posttest (the pretest posttest control group design). The experiment occurred in second semester 2017 at Thawsi School, lasting for 5 weeks. Preschoolers participated in 10 activities according to the experimental plan. In case of participants did not complete all 10 activities, the researcher would analyze data of only participants who complete at least 8 activities.

Participants

There were 24 male and female preschoolers studying in 3rd year Kindergarten of Thawsi School, Bangkok participating in the study. The participants were divided into group of twelves. One was an experimental group and another was a controlled group. All participants selected by simple random sampling. The researcher used pretest and matching for grouping and do another simple random sampling again for grouping participants into controlled group and experimental group. All participants were permitted, by their parents, to participate this study.

Instruments

The instruments used in this study were:

1. Sequential Storytelling Plan

The Sequential Storytelling Plan was an activity plan that aim to develop the 5 domains of the Executive Functions in preschoolers. There were 10 activities including in the plan and they all were sequential storytelling activities with different conditions, for example, pick up the character in the Three Little Pigs for a new different storytelling, or clay-storytelling: underwater world which young children can make clay into anything and tell their story connecting into one story under the condition that non-happy ending. Each activity lasted 45-50 minutes each along 5 weeks.

All activities will be developed the Executive Functions in all domains as shown in Table 1.

Table 1: Summary of Executive Functions development that children acquired from Sequential Storytelling Program

Domains	Executive Functions Development
Working Memory	<ul style="list-style-type: none"> • Be able to remember the story told by friend to retell to others. • Be able to create new story by using their own experiences.
Inhibitory Control	<ul style="list-style-type: none"> • Be able to inhibit themselves not to say special words. (in the activity that specify the forbidden word) • Be able to control themselves to tell story harmonized with friends.
Cognitive Flexibility	<ul style="list-style-type: none"> • Be able to adjust their own story to their friend story telling before.
Emotional Control	<ul style="list-style-type: none"> • Be able to control their own emotion in group activities. • Be able to tell their own emotion after activities.
Planning & Organizing	<ul style="list-style-type: none"> • Be able to follow the steps set by teacher. • Be able to tell problems and solutions of the activities.

2. The Executive Functions of Preschooler Assessment

The assessment used in this study will evaluates 5 domains of the Executive Functions in preschoolers which are Working Memory, Inhibitory Control, Shift/Cognitive Flexibility, Emotional Control, and Planning & Organizing. There are 25 questions, for activities assessment with 4 criteria containing different indicators. This assessment will be used along with storybook. Teacher will tell story and then ask questions and do activities from the story

Table 2: Example Questions used for Executive Functions Development Assessment

Domains	Example Questions
Working Memory	<ul style="list-style-type: none"> • Describe outstanding characteristic of 4 characters. • Describe event in the storybook 5 events.
Inhibitory Control	<ul style="list-style-type: none"> • Restrain themselves not to speak with other when teacher is telling story. • Do things opposite with what happen in the story, for example, show “Wrong Mark” if the character is in the story or show “Correct Mark” if the character different is not in the tory.
Cognitive Flexibility	<ul style="list-style-type: none"> • Making new story from what happen in the storybook. • Discuss with others when doing group project.
Emotional Control	<ul style="list-style-type: none"> • Tell emotion and the reason of character in the story. • Control their own emotion when confront something regretful or disappointing
Planning & Organizing	<ul style="list-style-type: none"> • Plan to solve problems and follow the steps. • Be able to evaluate their own operation

Results

This research aims to study the effect of Sequential Storytelling Program on Executive Functions of preschoolers and there are 2 hypotheses which are;

Hypothesis 1: The experimental group participating the Sequential Storytelling Program will have Executive Functions more than before participating the program.

The researcher examined the hypothesis 1 and found that the experimental group participating the Sequential Storytelling Program have Executive Functions more than before participating the program at the level of .001 ($t=6.10, p^{***}<.001, 1$ -tailed). It was found that the participants of experimental group had higher Posttest scores than before attending the program in every domain. To explain the each domains of Executive Functions, First domain is the Working Memory, the experimental group participants had higher Posttest scores than before attending the program at the level of .000 ($t=5.74, p^{***}<.001, 1$ -tailed). Secondly, the Inhibitory Control, the participants significantly had higher scores than before participating the Sequential Storytelling Program at a level of .001 ($t=4.13, p^{***}<.001, 1$ -tailed). Third, the Cognitive Flexibility, the participants of experimental group had higher scores than before participating the Sequential Storytelling Program significantly at a level of .000 ($t=4.60, p^{***}<.001, 1$ -tailed). Next, the Emotional Control, it was shown that the participants had higher scores than before participating the program significantly at a level of .000 ($t=5.93, p^{***}<.001, 1$ -tailed). Lastly, the Planning & Organizing, the scores of experimental group were higher than before participating the Sequential Storytelling Program significantly at a level of .001 ($t=3.99, p^{***}<.001, 1$ -tailed) as shown in Table 3

Table 3 : The comparison of pretest and posttest scores of the experimental group before and after participating the program

Domains	Experimental Group (n=12)				t	p
	Pretest		Posttest			
	M	SD	M	SD		
Executive Functions	2.10	.27	2.33	.32	6.10***	.000
Working Memory	1.52	.52	2.37	.27	5.74***	.000
Inhibitory Control	2.14	.60	2.93	.16	4.13***	.001
Cognitive Flexibility	1.91	.70	2.88	.16	4.60***	.000
Emotional Control	2.20	.38	2.81	.15	5.93***	.000
Planning&Organizing	2.32	.54	2.87	.10	3.99***	.001

Note : *** $p<.001$, ** $p<.01$, * $p<.05$

Hypothesis 2 : The experimental group participating the Sequential Storytelling Program will have Executive Functions more than the controlled group who did not participate the program.

The researcher examine the hypothesis 2 and found that the participants of experimental group who attending the Sequential Storytelling Program had more rising Executive Functions scores than the controlled group who not attending the program significantly at a level of .004 ($t=1.04, **p<.01, 1$ -tailed). To explain each domains of the Executive Functions, there were 4 domains that the experimental group significantly got more rising scores than the controlled group, who did not

attend the program, which were the Inhibitory Control, at a level of .024 ($t=2.34$, $*p<.05$, 1-tailed), the Cognitive Flexibility which the experimental group got more rising scores than the controlled group significantly at a level of .014 ($t=2.69$, $*p<.05$, 1-tailed), the Emotional Control which more rising scores significantly at a level of .007 ($t=2.42$, $**p<.01$, 1-tailed), and the Planning & Organizing which the experimental group had more rising scores than the controlled group significantly at a level of .014 ($t=2.92$, $*p<.05$, 1-tailed). However, it wasn't shown that the Working Memory of experimental group was higher than the controlled group significantly at a level of .155 ($t=2.09$, $p>.05$, 1-tailed) as shown in table 4

Table 4 : The comparison of pretest and posttest scores between experimental group and controlled group before and after participating the program

Domains	Experimental Group (n=12)					Control Group (n=12)					t	p
	Pretest		Posttest		\bar{D}	Pretest		Posttest		\bar{D}		
	M	SD	M	SD		M	SD	M	SD			
Executive Function	2.10	.27	2.33	.32	.23	2.12	.358	2.18	.37	.06	1.04**	.004
Working Memory	1.52	.52	2.37	.27	.85	1.52	.82	2.10	.44	.58	2.09	.155
Inhibitory Control	2.14	.60	2.93	.16	.79	2.19	.63	2.47	.36	.27	2.34*	.024
Cognitive Flexibility	1.91	.70	2.88	.16	.97	2.09	.69	2.42	.36	.32	2.69*	.014
Emotional Control	2.20	.38	2.81	.15	.61	2.10	.50	2.19	.47	.09	2.42**	.007
Planning & Organizing	2.32	.54	2.87	.10	.56	2.20	.55	2.37	.42	.17	2.92*	.014

Note : *** $p<.001$, ** $p<.01$, * $p<.05$

Conclusion

Executive Functions is an important life skill which can be improved most in preschoolers. Therefore, this research study the effect of Sequential Storytelling Program on Executive Functions of preschoolers by using Executive Function of Preschooler Assessment created by researcher to study the effects of program designed from Cognitive Development Theory of Piaget and the Compatible Learning Theory. The methods used for assessment designed to use with the program created concordantly. The result shows that, before participating the program, the participants of experimental group and controlled group had equivalent in Executive Functions confirmed by pretest result. After the experimental group participating the Sequential Storytelling Program, it is found that the experimental group participants had more rising scores in every domain, and more than the controlled group in 4 domains which

were Inhibitory Control, Cognitive Flexibility, Emotional Control, and Planning & Organizing. The Working Memory was the only domain not showing that the experimental group had more rising scores than the controlled group. In summary, The Sequential Storytelling Program is able to develop the Executive Functions in 4 domains of Inhibitory Control, Cognitive Flexibility, Emotional Control, and Planning & Organizing.

The result shows that this program is effective to be used for Executive Functions development in preschoolers. Even the program is not able to develop all domains of the Executive Functions, it is able to develop 4 important domains. Moreover, according to the preschooler comments, they found that it was fun and interesting to participating the program frequently and they want to do this activity more even the study was finished. This results shows that the Sequential Storytelling Program is not only able to develop the Executive Functions, but also suitable and interesting for the preschoolers

Research Implications

The Sequential Storytelling Program is the activity suitable for preschooler age of 5 years old and above because they can use language to express their idea and they are able to do activity with others. The activities are suitable for small group about 5-12 people depending on the age of children. The Sequential Storytelling Program can develop the Executive Functions in preschoolers in many domains. Therefore, it is good to apply this as an extra activity in kindergarten classroom. Teacher may lead preschoolers to do activity together or have the children play with themselves and let them tell their imaginary story without any control from teacher or any framework, just only simple task such as telling story from clay, puppet or painting.

Moreover, the parents can use this activity to their children after bedtime or daily storytelling. Parents may ask question from the story, change a plot to have children solve the problem and imagine from changing situation, let children pick up their favorite character to retell again noticeably, or let children do sequential storytelling activity in free time. The sequential storytelling can be regularly used both at school and home for more Executive Functions development in preschoolers.

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Social Innovation: Towards Community Wellbeing and World Peace, a Case Study of Weixin Shengjiao I Ching University's Lifelong Learning

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Abstract

The global environment is facing natural drastic changes. The rapid changes have eroded our humanistic values. The implementation of humanistic education has become a most concerned issue to all countries, and lifelong learning has also become a good prescription. However, "lifelong learning" has always been a popular slogan. How lifelong learning affects people's heart and human nature has not only brought rich wellbeing to participants, but also increased social value and impact. This study applied "social innovation" and "resource-based view" as the theoretical point of view, and I Ching University promotes religious lifelong learning as a case to explore two questions about the essence of lifelong learning: What to learn? and How to learn?" This study finds five major innovative points: (1) Integrating 7000 years of Chinese culture I-Ching Feng-Shui study and 2500 years of religion to become a driving force for world peace. (2) Applying the wisdom of Chinese culture I-Ching Feng-Shui heart method to solve the problems of poverty, hunger and war. (3) Applying Chinese culture I-Ching Feng-Shui heart method into moral, life, filial piety, culture and environmental education has generated social value and impact. (4) The activities in pray to Buddha classic, group practice and ancestor worship have cultivated people to have altruistic thinking. (5) To deeply go into all towns of Taiwan for lifelong learning promotion have been made the great contribution on the development of community wellbeing and stability, and the promotion of social harmony. Thus, this study proposed the practical and research implications.

Keywords: Social innovation, Lifelong learning, I-Ching Feng-Shui

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Introduction

The global environment is facing natural drastic changes. The human living environment has been seriously threatened by El Nino phenomenon, dust storms, ozone holes, hurricanes, tsunamis, earthquakes, plague, infectious viruses, grain reduction, famine and other natural disasters. Moreover, human issues, such as political struggle, religious consciousness, terrorist attacks, deterioration of depression, financial turmoil, unemployment, labor disputes, government debt crisis and so on, have raise a great deal of difficulties. Therefore, as information technology, genetic engineering, biomedicine, aerospace technology and alternative energy keep developing in the twentieth century, today's human beings face not only a variety of natural disasters and the impact of human persecution, but also more material desires, disparity, economic crisis, cultural destruction, mental stress and so on.

At the same time, the problems arising from the aging population and the declining birth rate have come into being. According to the World Population Ageing report, published by the Department of Economic and Social Affairs of the United Nations (2013), it indicated that the global population continued to decline due to sustained low fertility and increasing life expectancy. On the other hand, the rates of working-age population and the elderly population are increasing. Almost all countries are facing the problem of population aging, and especially in developed countries, the aging rate is the fastest. At present, the proportion of the elderly population over the age of 60 in the world has increased from 9.2% in 1990 to 11.7% in 2013. By 2050, it is expected to climb to 21.1%, more than 2 billion people. Moreover, it is estimated that the global population aged over 60 will exceed the population aged 0~14 years in 2047. Similarly, the fertility rate in Taiwan has continued to decline significantly over the past decade. In June 2016, the people aged 15 to 64 years accounted for 73.72% of the total population (17,333,560 people), senior citizens aged 65 years and over accounted for 12.83% (3,015,491 people), and the population of children aged 0 to 14 years accounted for 13.45% (3,162,311 people). To 2017, the population of people aged over 65 years will exceed that of children aged 0 to 14. The aging index is greater than 100%. And to 2031, it is estimated that people aged 15 to 64 years will account for 63.7% (14,969,500 people) of the total population, people aged over 65 years 24.4% (5,734,000 people), children aged 0 to 14 years 11.9% (2,796,500 people) (Taiwan National Development and Human Resources Development Division, 2016; Taiwan Interior Ministry, 2016).

The implementation of humanistic education has become a most concerned issue to all countries, and lifelong learning has also become a good prescription. However, "lifelong learning" has always been a popular slogan. How lifelong learning affects people's heart and human nature has not only brought rich wellbeing to participants, but also increased social value and impact. During the last decade, social innovation has emerged as an outstanding topic for private sector, public institution, and nonprofit organization. Issue such as poverty, climate change, and inequality can be seen either as a burden or as a source of innovation. This growing interest is due to the necessity of finding alternative ways for solving social problems which address regional differences and pay attention to the expectations of society and also its potential positive effects on well-being and sustainable development. This study applied "social innovation" and "resource-based view" as the theoretical point of view, and Weixin Shengjiao I Ching University promotes religious lifelong learning as a

case to explore two questions about the essence of lifelong learning: What to learn? and How to learn?" Therefore, the purpose of this study is to explore how Weixin Shengjiao I Ching University applied the concept of "social innovation" on the religious lifelong learning to achieve the goal of community wellbeing and world peace.

Literature Review

Resource based view

Wernerfelt (1984) first proposed a shift in analyzing organizations from a focus of product-market to that of a resource position. He defined a resource to be "anything which could be thought of as a strength or weakness of a given firm" (p.172). Resource based view (RBV) is useful in determining whether a firm's strategy will create value and also enables the organization to conceive and implement strategies for improving efficiency and effectiveness (Barney, 1991). Resources are classified as tangible (including financial and physical resources), intangible (including reputation, technology, and organizational resources), or personnel-based (including culture, training, commitment, loyalty and knowledge) (Grant 1991). Recent literature has emphasized on dynamic capabilities, which comprise the capability (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets' (Teece, 2007, p. 1319).

Social Innovation

Social innovation is a process initiated by social actors to respond to a desire, a need, to find a solution or to seize an opportunity of action to change social relations, to transform a frame or propose new cultural orientations to improve the quality and community living conditions (Crises, 2014). Social innovations encompass "changes in the cultural, normative or regulative structures of the society which enhance its collective power resources and improve its economic and social performance" (Heiskala, 2007, p. 74). Social innovation can be defined as the "development and implement of new ideas (products, services and models) to meet social needs" (Mulgan, Ali, Halkett, & Sanders, 2007, p. 9, cited by Howadlt & Schwarz, 1010, p. 25); be concerned with generation of social value (Cloutier, 2003; Saucier et al., 2006; Phills, Deigmeier, & Miller, 2008; Assogba, 2010; Herrera, 2015) for social actors and society; and also "create new social relationships or collaborations" (Murray, Caulier-Grice, & Mulgan, 2009, p. 3). At present, it can be stated that social innovations are becoming more and more significant for economic growth (Mulgan et al., 2005). This is partly due to the fact that some of the economic growth barriers such as climatic changes or aging of societies, may be overcome only by implementation of social innovations, which reinforce human relations and well-being instead of straining these. Social innovation is innovation in social relation as well as in meeting human need (MacCallim et al. (eds), 2012). Moulart, Martineli, Swyngedouw, and Gonzalez (2005) identify three main dimensions of social innovation: (1) satisfaction of human needs that are not currently satisfied; (2) changes in social relations, especially with regard to governance, that not only enable the satisfaction of needs, but also increase the level of participation,

especially of deprived groups in society; (3) increasing the socio-political capability and access to resources required to enhance rights to needs' fulfillment and participation.

Lifelong Learning

Since the 1970s, lifelong learning has become significant in the shaping of national and international education policy, linked both with global economic competition and goals of equality and social cohesion (Holford et al., 2008). Within both of these broad agendas, lifelong learning is rooted within a focus on the dynamics of change related to the rise of global capitalism: "the changing nature of technologies, of work and the labor market, of the global markets, and of the demographic composition of organizations" (Rizvi and Engel, 2009, p. 533). In 1996, the UNESCO published a report titled "Learning: The Treasure Within" which emphasized the importance of lifelong learning for the development of human society, it then put forward the four pillars of education: "learning to live together", "learning to know", "learning to do", "learning to be". This opened a new era for lifelong learning (Delors et al., 1996). In 2003, UNESCO Education Research Institute examined the rapid pace of social change, as well as the environmental changes influencing each individual and the importance of their ability to adapt with each passing day. Proposing the idea "learning to change" the proposed "learning to change" idea is regarded as the fifth pillar of lifelong learning. The Ministry of Education of Republic of China working in concert with the United Nations Educational, Scientific, and Cultural Organization, UNESCO, recommended that 1998 be the year for "Lifelong Learning". Similarly, I Ching University, along with the United Nations Educational, Scientific and Cultural Organization, UNESCO actively encourages lifelong learning. In 2000, it actively offered many kinds of classes for students and the community people wishing that by studying the I-Ching, the body and mind of the whole of society can be healthy, fostering knowledgeable mature members of society that are able to cope with changes within their surroundings.

The Case: Weixin Shengjiao I Ching University

The University goes all the way back to when the Republic of China was promoting courses on lifelong education. The I Ching University has been a pioneer in the promotion of lifelong education. In 1994, the President of the Republic of China, Mr. Lee Teng-hui made a clear policy statement on "lifelong education": "The idea of lifelong education is to confirm that everyone has his need for education in every stage of life and aims to establish a learning society". Therefore, the founder of Weixin Shengjiao, Grand Master Hunyuan suggested that everyone deserve a basic right of learning. In the same year, I Ching University was founded and began to offer lifelong learning to carry forward Chinese culture and to advocate I Ching learning. In the history of education in R.O.C., I Ching University is a pioneer promoting lifelong learning with its founding purpose of cultivating talents, revitalizing people's morals, refining ambitions, and creating universal harmony. At present, I Ching University combines I-Ching Feng-Shui of Chinese culture with Confucianism, Buddhism, Taoism and the thoughts of Chinese hundred schools and offers three dimensions of lifelong learning, lifelong education, academic education and international education. That implements the core values of Weixin Shengjiao's religious education containing moral education, life education, environmental

education, filial piety education, and cultural education, and reach the ultimate goal of “practicing for nation and praying for people”.

Research Findings

This study applied case study method to explore how I Ching University conduct the concepts of “social innovation” and “resource-based view” to promote the religious lifelong learning for community wellbeing and world peace. This study found five major innovative points:

- (1) Integrating 7000 years of Chinese culture I-Ching Feng-Shui study and 2500 years of religion to become a driving force for world peace.

This study found that Weixin Shengjiao I Ching University adopted religious and cultural inherited pathway of traditional Chinese nation. The pathway can be traced back about 14,500 years ago, when the universe was chaotic, Hong Jun Lao Chu (鴻鈞老祖) disclosed the secret of chaos, which was developed into the Kunlun civilization (崑崙文明). 7,352 years ago, Fuxi (伏羲) founded the Bagua (eight trigrams). The Fuxi civilization is later inherited by Jiutian Xuannu (九天玄女). She developed Tai Chi (太極), a so-called Manifested (later heaven eight guas), synthetic Bagua, in which two polarities give rise to four phenomena and so on. After that, the knowledge was passed down to three ancestors. Inheriting from Fuxi civilization, Yellow Emperor (黃帝) and Yan Emperor (炎帝) developed Lian Shan Gui Zang (連山歸藏). Yellow Emperor invented humanities, clothing, food, housing, transportation so the noble Yellow Emperor is considered as patriarch of humanity. He advocated human closeness, which meant people helped each other. Yan Emperor invented medicine and agriculture so the noble Yan Emperor is considered as the agriculture and medical patriarch. He advocated to raise and cultivate talented people. Emperor Chiyou (蚩尤帝) inherited Jiutian Xuannu and invented the Later Heaven Nine Places and Eight Guas (後天九宮八卦). It is three Yuan Nine Yuan (三元九運) and rule of nine planets movement, which emphasized application. Emperor Chiyou developed metallurgical technology, so Emperor Chiyou is the patriarch of industry. He advocated the idea that the noble should cherish his virtuous subordinates. The knowledge of Yellow Emperor, Yan Emperor and Chiyou Emperor was transferred to Wang Chan Lao Chu (王禪老祖), forming Guigu culture (鬼谷文化). Guigu culture is the future of the world as well as a beacon of peace. It is the cornerstone of Chinese culture. Grand Master Hun Yuan established I Ching University applying Chinese culture and I-Ching Feng-Shui heart method to the present time and made it flourish in Taiwan and overseas. Grand Master Huan-yuan believes that the book of changes (易經) is a beacon of peace for the world. In 1985, Grand Master Huan-yuan while discussing a passage in the I-Ching heart method which clearly points out that in the 5,000 years of Chinese history the most prosperous dynasties were those of the Zhou, Han, Tang and Qing Dynasties which all use the book of changes as a guiding principal to govern the country.

Furthermore, Grand Master Huan-yuan pointed out that the origin of the book of changes in China goes back 7000 years, and has not been abandoned, it will have its essential meaning, in which could not be overturned. It is an indispensable method

still in existence for the good of humanity. We also hope that all human beings are able to recognize that in order to preserve the human race we also need to live in peaceful coexistence and compassion with one another. We also need to realize that constancy and change of conscience of the human race is peace, and only then we will be able to reach eternal constancy. Only the human race has the ability to change or remain constant, and continue to move forward. When each individual's mind is at ease and in balance it will manifest outwardly resulting in a universal brotherhood and an environment of peace around the world.

(2) Applying the wisdom of Chinese culture I-Ching Feng-Shui heart method to solve the problems of poverty, hunger and war.

This study found that I Ching University considers that business management is fundamental to people's livelihood in human economy. If an enterprise has a crisis, the society will become chaotic and have moral related problems. Therefore, I Ching University has established the world Taiwan business services association to serve enterprises. Grand Master Hunyuan claims "if companies which have hundreds of employees' bankrupt, then the hundreds of families will suffer. It will be a helpless situation and cause social disturbances. Furthermore, Grand Master Hunyuan explained "each factory is like a temple; the business operator is like the abbot of the temple; the staff are like the residents. Everyone's heart is a temple. The establishment of the heart temple will make people feel peaceful and lead to the stability of companies and factories". If a company, a factory or a residential place follows the principles of Feng Shui, then the employees will have a secure life and finance, and thus be able to create a peaceful and prosperous society.

On the other hand, I Ching University conducted the power of religious practices in order to solve the crisis, and to prevent further crises. Prayers for all people associated to chant scriptures together, and pray together for ends to natural disasters and plagues and full harvests to abound. Therefore, Grand Master Hunyuan enlightened the World Peace prayer: "The dragon protectors help all living, to allow conflicts to resolve and end wars, prayers for people to love one another and also world peace."

(3) Applying Chinese culture I-Ching Feng-Shui heart method into moral, life, filial piety, culture and environmental education has generated social value and impact.

This study found that the philosophy of *Liji*, *Liyun Datong* (Book of Rites, Chapter of Great Harmony) is the core value of these five kinds of education. In 2007, Grand Master Hunyuan began to interpret *Liji*, *Liyun Datong* (Book of Rites, Chapter of Great Harmony) in a meditative way. He pointed out that *Liji*, *Liyun Datong* (Book of Rites, Chapter of Great Harmony) is Confucius' supreme heart method of ruling country, family and career. It is also a heart method for our inner uneasiness and dissatisfaction. Confucius realized the greatness of *Liyun Datong* (Chapter of Great Harmony); that is why it has been passed down to the present. Then, the Father of Republic of China, Dr. Sun Yat-sen promoted to the whole world. "*Liji*, *Liyun Datong* is a heaven way, a method of pacifying human mind, which is a truth derived from ancient sages' experience of enlightenment. It is an excellent classic for us to practice, to found a nation, and to fulfill world peace. It brings hopes to Chinese descendants in the future. *Liji*, *Liyun Datong* is great wisdom which points out the direction for governing a nation, and the method to manage our mind, family, career,

society and nation. If everyone can understand *Liyun Datong*, I believe that the world will be peaceful.” “Modern life and social phenomena are both inseparable from the word *li* (etiquette)”. In *Liyun Datong*, etiquette is the main idea and the first priority. *Li* (etiquette) is applicable to managing our life, changing our destiny, and enhancing the harmony of society. Therefore, to establish everyone’s dignity is the most important for us to carry forward the truth of *Liyun Datong*.

(4) The activities in pray to Buddha classic, group practice and ancestor worship have cultivated people to have altruistic thinking.

This study found that I Ching University conducted the following activities to generate people having altruistic thinking:

Chanting classic scriptures at home: I Ching University believed that chanting scriptures allows us a peace and quiet that is deep in our hearts, making life and work more successful and harmonious, ridding of troubles and bad karma and salvation to our ancestors, and even salvation to all spirits in the realm. This kind of true wish uses chants to benefit oneself and others, firmly believing through chanting scriptures, the merits and returns will be able to repay our ancestors. Prayers for the end of epidemics, end of natural disasters, end of wars, and for people to love each other and to achieve world peace.

Group practice: For the purpose of clarifying human’s heart, Grand Master Hun Yuan conducted a lecture on the scriptures in the main temple of Weixin Shengjiao. Grand Master Hun Yuan uses the angle of I Ching Feng Shui heart method to help all enter the mindset of the sage and emulate their saintly deeds. It departs from the default kind human nature to reach the other side of bright wisdom, seeing clear one’s tendencies once the heart is clear and to develop the brightness of inner self to promote for social stability and peace.

Group ancestor worshipping : I Ching University held the “Chinese Jointed Ancestors Worship Ceremony” to lead the public to express their retrospection, repentance and recollection to their ancestors. The ultimate goals are to help Chinese ancestral spirits return to Nantian Pure Land and be reborn to Western Pure Land, and eventually to achieve universal peace.

(5) To deeply go into all towns of Taiwan for lifelong learning promotion have been made the great contribution on the development of community wellbeing and stability, and the promotion of social harmony.

This study found that I Ching University has 42 learning hubs, 33 learning classrooms in the towns and communities in Taiwan. In addition, overseas classrooms have been set up in Hong Kong, Vietnam, Japan, Spain, Los Angeles and New York in U.S, and Toronto in Canada. Meanwhile, Weixin network TV station has been founded in the Weixin Shengjiao volunteering career system, broadcasting the courses offered by I Ching University 24 hours a day. According to a study which investigated the students of I Ching University who participated in the lifelong learning of religious education, the empirical results indicated that the main motivations of learning were their intention of social contribution and interest of knowledge. Their motivations brought significant improvement on their family and life satisfaction, and the

wellbeing (Chen, Li & Lin, 2015; Chen, Li & Lin, 2015).

Conclusion

Social innovation is an essential process for the evolution of society and search for sustainable alternatives for the collective wellbeing. Therefore, social innovation is not only about social objectives; the usage of term “social” expresses the social means and refers to the development of new social relationships (Marga, 2015). In this study, the I Ching University was found that to commit on carrying forward I-Ching Feng-Shui of Chinese culture all over Taiwan and the world to reach the ultimate goal of community wellbeing and the world peace. Five major social innovative points have been found. The religious education of I Ching University aims to develop human virtue and wisdom to let everyone live, learn, work and grow in a peaceful and safe environment. Finally, the purpose of I Ching University is to nurture talents. Its ultimate goal is to build a polite society as described in Liji, *Liyun Datong* (Book of Rites, Chapter of Great Harmony) which says thus evil scheming is repressed, and robbers, thieves and other lawless elements fail to arise. So that outer doors do not have to be shut. This is called the “Age of Great Harmony”.

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***Relationship Between Stress and Saliva Biomarkers in Breast Cancer Patients
Receiving Outpatient Chemotherapy***

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Abstract

The Breast cancer is the most frequent type of cancer in women and has increased by westernization of lifestyle. The 30 's - 50' s, breast cancer patients, live with many roles and responsibilities in the company and at home, and they are within a period of stressful diversity. A physiologically active substance which changes depending on the stress state is expected to be used as an objective physiological biomarker of a human stress state. It has been reported that salivary α -amylase and cortisol are useful tools to take stable values in normal times and investigate the effects of stress. This study aimed to clarify whether the biomarkers in saliva was related to mood/emotion of a cancer patient undergoing chemotherapy. Five breast cancer patients being treated by outpatients chemotherapy were recruited. A questionnaire was used to survey the attributes, and level of stress in these patients based on the POMS2 (Profile of Mood States 2nd Edition). Salivary cortisol and salivary α -amylase were measured as salivary biomarkers. There were one subject with a strong negative emotional state and four on average. Salivary cortisol, and α -amylase were not associated with POMS2. Future research should involve larger numbers of patients.

Keywords: cancer, outpatient chemotherapy, saliva biomarkers, stress

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Introduction

Due to progress in therapy, cancer chemotherapy has been implemented in outpatient clinics, and the number of patients receiving treatment that is compatible with a social life is increasing. Breast cancer, the most frequent cancer that primarily affects women, is predicted to increase as lifestyle become more Westernized. During their 30s to 50s age, breast cancer patients, live with many roles and responsibilities at work and at home, and they are within stressful diversity. In addition, treatment of breast cancer involves chemotherapy accompanied by mastectomy or hand numbness, which creates a situation where a woman's body image changes and she cannot perform her role in housework, childcare, work, and so on. Many patients are expected to experience high levels of stress by being unable to fulfill their roles in society and at home. Currently, physiologically active substances that change according to stress conditions are expected to be used as objective physiological indicators (biomarkers) of human stress conditions. A biomarker is secreted not only in the blood, but also in saliva. Moreover, saliva is a biochemical endocrine sample that can be collected noninvasively and continuously. Salivary cortisol and α -amylase have been reported to be stable tools in normal situations and to be useful tools to investigate the effects of stress^{1) 2)}. Currently, there is no research using salivary biomarkers focusing on patients with breast cancer during outpatient chemotherapy. The purpose of this study is to investigate the relationship between saliva biomarker and patient's stress.

Result and Conclusion

Five breast cancer patients being treated by outpatients chemotherapy were recruited. Two of the participants were working: one who had a spouse (partner) and one without children.

One difficulty with balancing life and treatment was that one hospital was far away. There were three findings related to side effects. The salivary cortisol was 0.077-0.169 $\mu\text{g/dl}$, and the salivary α -amylase was 37.392-128.576 U/mL. Both salivary cortisol and α -amylase demonstrated variability in each patient.

Based on these results, it is possible that patients undergoing neo adjuvant chemotherapy may feel strong negative emotions, so as we continue to increase the number of participants in the future, we will focus on the results of patients who undergo neo adjuvant chemotherapy.

In the future, it would be necessary to know the secretion pattern of salivary cortisol and α -amylase for each participant.

Table1. POMS2 and biomarkers in saliva result

Participants		A	B	C	D	E
POMS2 Tscore	Anger-Hostility(AH)	53	40	51	38	38
	Confusion-Bewilderment(CB)	66	46	46	53	38
	Depression-Dejection(DD)	64	41	50	45	45
	Fatigue-Inertia(FI)	54	43	56	49	36
	Tension-Anxiety(TA)	65	42	51	49	46
	Vigor-Activity(VA)	52	40	70	43	36
	Friendliness (F)	55	41	58	60	39
	Total mood disturbance(TMD)	60	44	47	48	43
Biomarkers in saliva	Cortisol($\mu\text{g/dL}$)	0.077	0.169	0.128	0.100	0.157
	α -Amylase(U/mL)	53.464	37.392	95.776	128.58	121.03

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Assessment Difficulty and Educational Needs of Home Care Nurses Providing Medical Care for Cancer Patients in Japan: Examining the Viewpoints of Home Care Nurse Managers

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Abstract

The primary cause of death in Japan is malignant tumors, and the increase in medical expenses is increasing social security costs. It is expected that home recuperation of cancer patients will increase in the future. Therefore, improving visiting nurses' practical skills is an urgent issue. This study aimed to clarify the assessment difficulty experienced by visiting nurses while providing medical care to cancer patients and to obtain suggestions for developing training programs for improving nursing practical skills. Semi-structured interviews were conducted with ten home care nurse managers from November to December 2017. Verbatim responses were collected and categorized using MAXQDA. Assessment difficulties were encountered during the following situations in medical care of cancer patients: "pain control" and "seeking safety and comfort in the occurrence of diverse symptoms caused by cancer recurrence, metastasis, and disease progression." Additionally, visiting nurses were managing methods to report physicians to support the patient's wishes, and coordinating with relevant organizations such as request a home call. According to the nurse managers, it is essential to ensure training opportunities for young and mid-career nurses, train nurses regarding the use of new medical equipment, conduct technical exercises on drug administration, and provide education on assessment techniques and medical viewpoints on respiration and circulation.

Keywords: nursing education, visiting nurse, cancer patient

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Introduction

Malignant tumors account for the primary cause of death in Japan, and the resulting medical expenses are squeezing social security reserves. In addition, a reduction in the number of hospital beds has been shown, and it is expected that home care for cancer patients will increase in the future. Therefore, improving practical cancer nursing skills in visiting nurses who support home care is an essential task.

To this end, cooperation between medical care and nursing care is indispensable for promoting at-home care. The government promotes home healthcare and the construction of a comprehensive regional care system in order to respond to these issues not only in elderly nursing care but also in medical policy (Ministry of Health, Labour and Welfare, 2011). As legislation for home health care advances, the number of patients who need visiting nursing has increased and their needs are diversifying. Demand from cancer patients with high medical dependence is expected (Ministry of Health, Labour and Welfare, 2011).

However, the turnover rate of visiting nurses is 15% (2007), which is higher than the turnover rate of other nurses (Japanese Nursing Association, 2009). It has been reported that visiting nursing stations are being closed due to the high turnover of visiting nurses (The National Association for Visiting Nurse Service, 2017). The number of visiting nursing stations was 9,735 in 2016. Although the number of cases has increased, the target value of the country in 2004 has not yet been reached (The National Association for Visiting Nurse Service, 2017).

In a previous study (Yoshida & Kojo, 2015), “anxiety about care” has been extracted as a turnover factor for visiting nurses. Specifically, it was found that nurses feel a weight of responsibility in judging and carrying out care. A survey of visiting nurses found that holding full responsibility for assessment and care implementation, having a 24-hour phone number, and work during holidays and at night made their work difficult. (Ochiai & Gouma, 2015). Meanwhile, it has been reported that an increased sense of accomplishment and job satisfaction gives visiting nurses the will to continue (Nakano, 2008). It has been pointed out that training is necessary for raising visiting nurses’ job satisfaction (Tomioka et al , 2007).

Furthermore, Tokuoka, Hayasida, Tanaka, Kagawa, and Furugai (2016) investigated the learning needs of the visiting nurses and focused on the judgment of providing cancer nursing at home and a new therapeutic method. It was reported that it was desirable for the training plan to focus on the contents and implement them according to the nurses’ learning needs.

From the above, it was necessary to establish an opportunity to learn about judgment of care for the consolidation of visiting nurses, and to develop a training system that realizes growth and gives them satisfaction in their work. Simulation education has been carried out recently in medical and nursing education to provide sufficient skill training. Sakuyama, Okazaki, Nakamura, Komatsu, Shiobara, and Fukushima (2011) conducted auscultatory training using a respiratory simulator for visiting nurses, and reported the effectiveness of practical training. The need for further program development for visiting nursing is expected.

Therefore, an interview survey was conducted for managers of visiting nursing stations, and scenarios in which visiting nurses were unable to decide on the appropriate care for cancer patients were extracted. The purpose of this study was to clarify in what circumstances visiting nurses get lost in judgment and experience difficulty when providing medical care for cancer patients, and to gather suggestions for program development.

Methods

Participants

The participants were ten visiting nursing station managers who conduct visit nursing for cancer patients in Miyazaki prefecture. The reason for focusing on administrators was that they have much experience facing visiting nurses.

There were ten participants (female: average age 52.1 years (SD = 7.3)), the average years of visiting nurse experience was 11.5 years (SD = 5.9) (Table 1), the interview time was mean 52.3 minutes.

Procedures

A random sampling method was used to select participants from visiting nursing stations in Miyazaki prefecture, in collaboration with Miyazaki University Medical School Hospital. The survey period was October to December 2017.

In the semi-structured interviews, participants were asked to answer the following questions. 1) In which scenarios do visiting nurses experience difficulty in caring for cancer patients?, 2) What kind of difficulties do you experience in advancing medical collaboration while caring for patients with cancer at home?, 3) The abilities that administrators require from visiting nurses. Data analysis used MAXQDA software.

Results

Outline of research data

The code obtained by data analysis was 74 codes. Assessment difficulties were encountered during the following situations in medical care of cancer patients: "Pain control" (Table 2), "Seeking safety and comfort in the occurrence of diverse symptoms caused by cancer recurrence, metastasis, and disease progression" (Table 3), "Difficulty in medical collaboration" (Table 4), and "Training opportunity needs" (Table 5).

Table 1: Participants

	Age	Experience of nurse	Visiting nurse experiences	Number of staff	Patient registration Mean/Month	Number of cancer patients/Years
A	53	13	20	11	50	5
B	38	3	13	5	25	3
C	56	16	17	10	68	13
D	49	10	13	6	35	8
E	52	8	14	6	27	4
F	62	21	17	10	38	2
G	44	18	5	12	70	5
H	50	26	3	8	40	4
I	59	30	6	9	90	5
J	58	15	7	6	39	21
Mean	52.1	16.0	11.5	8.3	48.2	7.0
SD	7.3	8.2	5.9	2.5	21.2	5.8

Scenarios where a visiting nurse experiences difficulty in caring for cancer patients

The scenarios in which difficulties in assessment in medical care of cancer patients occur are “Pain control” and “Viewpoint of assessment of diverse symptoms associated with cancer recurrence, metastasis, and progression”.

Pain control

“Pain control” showed difficulty from four factors. In the process of pain control, visiting nurses faced patient factors such as 1) “Refusal to use medical narcotics with his/her intention”, “When there is a need to use analgesics exceeding the amount indicated by the doctor”, and “The patient's inability to understand how to use the opioid and respiratory medication can cause the patient to feel uncomfortable with the medication”. As family factors, they faced “Anxiety about the current situation of the families taking pain medications beyond the indicated amount” and “Family members have difficulty coping with delirium and managing narcotics”. Factors for the nurse were 3) “Anxiety of the nurses about support for nursing that discontinues conversation with the family by sedation” and “Judgment of pain and increased dyspnea and limit of comfort care”. Factors for the hospital and the doctor were 4) “It is difficult for the physicians and patients to arrive at a common judgement/decision regarding increasing the amount of narcotics” and “Not prescribing physician estimates when the patient's pain is strong and the medication is not effective” (Table 2).

Table 2: Pain control

Patient factor
<ul style="list-style-type: none"> • Refusal to use medical narcotics with his/her intention (want to be like himself/herself) • When there is a need to use analgesics exceeding the amount indicated by the doctor • The patient's inability to understand how to use the opioid and respiratory medication can cause the patient to feel uncomfortable with the medication.
Family factor
<ul style="list-style-type: none"> • Anxiety about the current situation of the families taking pain medications beyond the indicated amount • When family members have difficulty coping with delirium and managing narcotics
Nurse factor
<ul style="list-style-type: none"> • Anxiety of the nurses about support for nursing that discontinues conversation with the family by sedation • Judgment of pain and increased dyspnea and limit of comfort care
Hospital / doctor factor
<ul style="list-style-type: none"> • It is difficult for the physicians and patients to arrive at a common judgement/decision regarding increasing the amount of narcotics. • Not prescribing physician estimates when the patient's pain is strong and the medication is not effective

Viewpoint of assessment of diverse symptoms accompanying recurrence, metastasis, and progression of cancer

“Viewpoint of assessment of diverse symptoms accompanying recurrence, metastasis, and progress of cancer” showed a sense of difficulty. In particular, cases of long-term home care recipients such as rheumatism and Parkinson's disease, which are non-cancer diseases, were shown to be cancer cases. There, visiting nurses experienced difficulty in dealing with safety and comfort in home care for various symptoms caused by metastasis and recurrence (Table 3).

Table 3: Seeking safety and comfort in the occurrence of diverse symptoms caused by cancer recurrence, metastasis, and disease progression.

Assessments of diverse symptoms
<ul style="list-style-type: none"> • Dealing with symptoms of metastasized cancer • In addition to chronic illness, as cancer progresses, difficulty in searching for safety and comfort in various medical procedures • When there is no coping method for patients' suffering and they recognize their limits as nurses • Dealing with delirium

Difficulty of visiting nurse in medical cooperation scenario

In this survey, “Difficulty in medical collaboration” was extracted. “Responding to different medical equipment for each clinic's doctor”, they had constructed a system to deal with immediate actions with medical manufacturers and were able to respond. On the other hand, cooperation with medical institutions was shown to result in a “Dilemma in conveying the patient's wishes to the doctor” and a “Dilemma of information recognition differing in continuous nursing” (Table 4).

Table 4: Difficulty in medical collaboration

Difficulty in medical collaboration
<ul style="list-style-type: none"> • Dilemma in conveying the patient's wishes to the doctor • Dilemma of information recognition differing in continuous nursing
Dealing with different medical devices used for patients in cooperative situations
<ul style="list-style-type: none"> • Responding to different medical equipment for each clinic's doctor

Education needs

As for the visiting nursing manager, “Educational Needs” has training opportunities as nursing skills training for young nurses and mid-career nurses, and training opportunities when introducing new medical equipment. The training content was “Technical exercises on drug administration”. In addition, there was an educational need to assess skills in improving respiration and circulation (Table 5).

Table 5: Educational Needs

Training opportunity
<ul style="list-style-type: none"> • Nursing skills training for young nurses • Nursing skills training for mid-career nurses • Training opportunities when introducing new medical equipment
Training content
<ul style="list-style-type: none"> • Technical exercises on drug administration • Assess skills in improving respiration and circulation • Clinical reasoning

Discussion

The purpose of this paper is to clarify 1) the difficulty that visiting nurses face, from the viewpoint of the administrator, in caring for cancer patients; and 2) suggestions for program development toward the improvement of visiting nurses' practical nursing skills. In pain control, four factors intertwined in a complicated way and created a difficult feeling for visiting nurses. Overdose of analgesics by a family member and the fear of the side effects of the medicine increases the anxiety of the nurse. Under such circumstances, the visiting nurse tries to collaborate with the medical institution in order to control the patient's pain, and repeatedly makes adjustments to reach an appropriate amount. Although the nurse tries to make adjustments to alleviate the pain of the patient, there were a case of re-hospitalization from the hope of the patient and the family, and it seems that the visiting nurse showed a sense of difficulty when dealing with pain control. Sugikoto, Koga, and

Nishigaki, (2009) reported that families who experience home visits cannot relieve pain, and point out that pain control is a major problem in home care. In fact, a survey found that the administration of a strong opioid analgesic within one week before death is 72% in palliative care wards (Sato, 2010), and 52% in home care (Hashimoto et al, 2015). In the report, it is stated that the patient experienced physical problems (pain, dyspnea, fatigue), and the family experienced mental problems (anxiety, depression, grief) as reasons for the termination of home care and the resulting hospitalization (Hashimoto et al, 2015) .

In other words, visiting nurses play a role as a bridge between patients, their families, and hospitals/physicians in situations where sufficient palliative care cannot be carried out, and have a role of controlling pain, but it has been shown that there is a problem in realizing this role.

Furthermore, in the current situation, the practice and research in palliative care for non-cancer diseases are delayed in Japan(Hirahara,2017). In addition, there are social factors such as an increase in households of elderly couples and dementia, and it is pointed out that there are living problems that cannot be dealt with adequately by merely considering palliative care concepts centered on symptomatic relief for cancer patients (Hanazato & Ashiya, 2017). For visiting nurses, it is considered necessary to develop the capacity to advance more precise cooperation. From the above, it is necessary to improve the ability of visiting nurses to practice nursing, improve the assessment ability of various symptoms, and foster smooth cooperation with medical institutions.

In medical cooperation, it is inferred that difficulty is encountered while visiting nurses are encouraging patients to follow the desires of carers and their families in their home life. Hashimoto et al. (2015) reported that the median number of days of home care is 38, and it can be seen that the time from the start of the care of the visiting nurse to the home visit is limited. Hisamatsu & Niwa (2011) stated a need to support swaying feelings and the anxiety of medical persons and families as the cancer terminal term changes. In addition, Fujikawa, Kobayashi, Hirasawa & Iiyoshi (2011) reported that it is necessary to discuss opinions with the attending physician, share information, respect the consciousness of medical personnel and families, talk about care, coordinate policies, and provide home terminal care. Even in the stories provided by managers in this study, measures to report to doctors and efforts to devise measures for timing were discussed. Therefore, it is necessary for visiting nurses to support the trembling feelings and anxiety of patients and their families in a limited time, foster the ability to agree on policies through exchanging opinions with the attending physician, and share information. Visiting nurses often visit alone, and it is presumed that there is little opportunity for experienced nurses to learn through model learning about the adjustment ability that veteran nurses demonstrate at the visit location. It is expected to position these skills as practical nursing skills for visiting nurses, to hold lectures in coordination with experienced visiting nurses, and to provide training through role play.

Conclusion

From the above, it is clear that the education of visiting nurses is not merely an acquisition of techniques for handling medical equipment, but rather that an assessment-type training is necessary. The development of an educational program is anticipated in home health care in an aging society, assuming that it will be suffering from duplicated diseases in addition to being accompanied by chronic illness, and that home care will be prevalent. Specifically, in order to improve the practical nursing abilities of visiting nurses, the assessment of overlapping symptoms such as adjusting respiration/circulation for safety and comfort in situations where cancer progresses, and assumed various medical treatments, training is considered necessary. In addition, because there is an educational need for a medical perspective, it is necessary to incorporate education on medical thinking methods such as clinical reasoning into training.

Particularly in collaboration with medical institutions, it is possible to propose lectures on cooperative skills by experienced visiting nurses and to develop training using role play. Furthermore, it is thought that technology training that assesses home care recipients and appropriately reports them to doctors will lead to smooth medical collaboration and help control pain. It is expected that programs such as education of indices judging that hospitalization is necessary and program simulation education linked to medical institutions reporting them will be developed.

Limitations

This research was an interview survey targeting administrators and reflects the perspective of the administrator. In the future, it will be necessary to investigate the challenges faced by visiting nurses. Also, it is necessary to develop programs and to try repeated trials in accordance with the educational needs of visiting nurses.

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***The State of and Issues Related to the Health Literacy of Healthy Elderly in Japan:
A Survey of Participants of a Regional Recreational Event***

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Abstract

In the aging society of Japan, the extension of healthy life expectancy is indispensable for managing the high medical and nursing care expenses and shortage of manpower for care workers. Further, it is important to improve the health literacy as social skills of the elderly for the management and maintenance of their health abilities. In this study, we conducted a questionnaire survey with 227 healthy elderly who participated in a bowling tournament, to clarify the conditions of health literacy and issues related to the necessary support. Only 9.7% of elderly collected health-related information. Most of the elderly used the support of their family or friends more often than that of health professionals to facilitate their health maintenance. A t test revealed that the total health literacy score and the communicative and critical health literacy scores were high among the elderly with a chronic illness or those with children. The functional health literacy score was high among men or those who could use the internet or smartphones.

These findings suggest that the elderly collected, confirmed, and selected information from conversations with their family or friends about their own health concerns. Collecting information from the internet is considered an effective skill of maintaining health; however, as the elderly have various kinds of complicated health histories, they need individualized care. Moreover, it is necessary to support the health behavior of the elderly with diseases by offering them opportunities to contact health professionals.

Keywords: Health Literacy, healthy elderly, social support

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Introduction

In the aging society of Japan, the extension of healthy life expectancy is indispensable for managing the high costs of medical and nursing care and the shortage of manpower for care workers. Furthermore, it is important to improve the health literacy (HL) of the elderly for the management and maintenance of their health abilities. World Health Organization (1998) defines HL as “cognitive and social life skills that regulate personal motivation and ability to access, understand, and use information necessary for promoting or maintaining good health.”

It is known that the mental and physical capabilities of the elderly decreases with aging, along with the development of various diseases, decreased frequency of going out, and decreased social exchanges (Ministry of Health, Labor and Welfare, 2016). Furthermore, the ability of active learning decreases with aging, and HL decreases as the cognitive ability to assess and evaluate information decreases (PLOS, 2014). If HL is low, the understanding and knowledge of diseases will also be low, thus resulting in events such as the accidental consumption of oral medication due to the inadequate understanding of instructions from doctors or nurses and the low frequency of use of preventive services (e.g., vaccination). Older adults with low HL tend to have poor self-management or chronic disease prevention in their lives (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011).

In the case of elderly people, high HL has been reported to have a positive effect on the extension of healthy lifespan, elderly quality of life (QOL), subjective health view, and happiness (Tokuda, Doba, Butler, & Paasche-Orlow, 2009). High HL would allow elderly people to collect, judge, and utilize necessary information and communicate clearly their own needs or doubts to the medical staff (Ishikawa, et al, 2018). Under a medical condition, HL could become a “risk” that can affect a patient’s understanding of treatment and obstruct the communication between medical professionals and patients or become an “asset” that determines individual health (Nutbeam, 2008).

It is necessary for the elderly to express their symptoms and problems verbally and understand the explanations provided to them by the medical staff. It is important to improve the HL of the elderly to enable them to manage and maintain their health management abilities, obtain medical and nursing care information, and communicate with their families and medical personnel regarding health maintenance behavior and medical care/nursing care decisions.

Medical and nursing care information is readily available to everyone because of the development of mass media and the internet. The internet usage rate by individual age group in 2016 was >90% in each stratum from 13 to 59 years of age; however, it decreased to 80% for individuals who are 60 years of age and <50% for individuals who are >65 years of age (Ministry of Internal Affairs and Communication, 2017). Furthermore, a survey revealed that 60- to 90-year-olds face difficulty in using informational devices such as automated teller machines, mobile phones, and personal computers (Yoshida, Kawamura, Shigetoshi, Zouda, & Oshima, 2017). With increasing age, the proportion of the elderly utilizing the internet decreases. The elderly who depend on information from books, family, and friends tend to have reduced abilities of understanding and transmitting information (Kitada, Nakamura, &

Yamashiro, 2015).

In Japan, it was estimated that the number of elderly aged >65 years will increase between the years 2015 and 2040, in parallel with the increase in the single-occupancy rate (National Institute of Population and Social Security Research, 2018). Given the rapid increase in the elderly population, the relationship among elderly people, families, and communities has been diluted to an extent that it has become difficult for the elderly to obtain social support (Waki, 2007). Supporting the increasing elderly population will be a challenge, such as in gathering information on medical, health, and nursing care, and will put a strain on family or neighbors. However, despite this situation in Japan, studies on the HL of the elderly are lacking, and information support remains poor.

In this research, we focused on healthy elderly people from a preventive perspective of maintaining health and improving health management skills. We conducted a questionnaire survey to identify the HL conditions of our subjects and the issues related to the acquisition of necessary support, including the type of support resources used to obtain the necessary information and the practice of health maintenance or healthy behavior. Moreover, we discussed the provision of information in accordance with the needs of the elderly to encourage the improvement of QOL.

Methods

Subjects

A self-administered questionnaire survey was conducted in June 2017 on 227 healthy elderly people who participated in a bowling tournament organized by the city's social welfare council. The questionnaires were distributed at the venue, asked to be filled out during the waiting time of the competition, and collected at the end of the event. The questionnaires were distributed at the reception of the bowling competition area. In the overall announcement, we explained the outline and purpose of the research, method, and ethical consideration and presented the research manual. The exclusion criteria were elderly people under the age of 60 years with difficulty in understanding the purpose of the research, low cognitive ability, poor eyesight, poor communication skills, poor ability of using writing instruments, inability to answer the questions themselves, and health issues that did not allow bowling.

Measures

(a) Characteristics of subject

The questionnaire included questions on age, gender, material status, presence or absence of a child, household composition, health conditions, health status, disease status (such as hypertension, diabetes, cataract, cancer, lumbago, heart disease, femoral fracture, renal failure, and cerebrovascular disease), health maintenance activities, social support, and internet use.

(b) Health literacy

HL was measured using the 14-item HL scale (HLS-14), which has been confirmed

reliable and valid for Japanese adults (Suka, et al., 2013). The 14 items comprised 5 items for functional HL, 5 items for communicative HL, and 4 items for critical HL. The reliability and validity of the HLS-14 were then assessed. Functional HL is defined as the skill to read, write, and function effectively in everyday life. Communicative HL involves the ability to obtain or collect information from different resources, and critical HL is the ability to critically analyze the obtained information. Respondents chose from one of the five options (1 = strongly agree/disagree to 5 = strongly disagree/agree), and the scores on the items were added to obtain the HLS-14 score (ranging from 14 to 70 points). The scores of each subscale (5–25 points for functional and communicative HLs and 4–20 points for critical HL) were then calculated. A higher subcategory score means a greater HL. In this study, we used the total scores of HLS-14 and the scores of functional, communicative, and critical HLs for analyses.

Statistical analysis

SPSS version 24 was used to analyze the data. For the relationship between each attribute and the subclassification of HLS-14, t-test was conducted to obtain the Pearson's correlation coefficient and difference.

Ethical consideration

This study was conducted with the approval of the Ethics Committee of Osaka University Hospital.

Results

(a) Characteristics of subject

A total of 227 people responded to the questionnaires (men = 59.0%; women = 40.5%; average subject's age = 73.4 ± 4.9). Table 1 shows the age, marital status, and household composition of the subjects. The HL score was 19.31 for functional HL, 15.05 for communicative HL, and 11.03 for critical HL. The total HL score was 46.03.

(b) Health status, health behaviors, and supporter for health maintenance

The recognition of the subject's health status is shown in Table 2, and the contents for health maintenance behavior are given in Table 3. The majority of the subjects (90.3%) stated that they were in a "very healthy to good health" state, whereas 70.5% mentioned having chronic illnesses. The chronic illnesses reported included hypertension (40.9%), diabetes mellitus (13.6%), heart disease (5.0%), cerebrovascular disease (3.7%), and cancer (5.8%). The aging symptoms of lower back pain and cataract were reported by 13% and 6% of the subjects, respectively. Almost all subjects (99.6%) practiced health maintenance behaviors such as exercise (29.9%), participation in volunteer activities (14.7%), conversation with friends (14.2%), ingenuity of meals (12.5%), and travel (8.0%). Approximately 14% of the patients visited a hospital, and only 9.7% of the patients gathered health-related information.

Approximately 75% of the subjects reported receiving support in maintaining health

from spouses (34.4%), friends (17.9%), children (14.5%), neighbors (11.1%), and medical personnel (5.7%) (Table 4). Support for health maintenance was provided more by family and friends than by health professionals.

(c) Experiences of providing nursing care

The proportions of subjects with experience in providing nursing care and those that believed that they would be provided with care in the future were 41% and 53%, respectively. Some subjects (46%) were not worried about receiving nursing care, whereas 80% of subjects were worried. The subjects hoped to receive nursing care at home (47.4%), at a child's home (1.7%), at a facility (47.4%), and at a hospital (6.5%).

Table 1 Characteristics of the study subject

		N	%
Gender	Male	134	59.0
	Femal	92	40.5
	No answer	1	0.4
Age	60-69	52	22.9
	70-79	148	65.2
	80-89	24	10.6
	Over 90	1	0.4
	No answer	2	0.9
Marital parter	Present	168	74.0
	Missing	49	21.6
	No answer	10	4.4
Child Status	Have child/children	169	74.4
	Have no child	9	4.0
	No answer	49	21.6
Household composition	Solitude	31	13.7
	Couple	99	43.6
	Two generations family (living with children)	80	35.2
	Others	12	5.3
	No answer	5	2.2
		Mean	SD
Health literacy scores	Functional HL	19.31	4.56
	Communicative HL	15.05	4.75
	Critical HL	11.56	3.51
	Total health literacy score	46.03	8.10

Table 2 Health status

	N	%
Good	44	19.4
Moderate	161	70.9
Not good	18	7.9
Poor	1	0.4
No answer	3	1.3

Table 3 Health maintain behaviors

	N	%
Exasise	175	29.9%
Volanteer	86	14.7%
Visiti to hospital	84	14.3%
Talk with friends	83	14.2%
Ingenuity of meal	73	12.5%
Collecting the health information	22	3.8%
Go to trip	47	8.0%
Not particularly	9	1.5%
Other	7	1.2%

Table 4 Support for maintain health conditions

	N	%
Spouse	90	34.4%
Friends	47	17.9%
Child/children	38	14.5%
neighbors	29	11.1%
Medical staff	31	11.8%
Grandson/grand daughter	7	2.7%
Welfare staff	15	5.7%
Others	5	1.9%

(d) Relationship among each attribute and HLS-14

No correlation was observed between the health conditions of the subjects and their HL; however, HL was affected by the presence of a chronic illness (Table 5).

Table 5 Correlation of factors

	Gender	Age	Child	Household composition	Health status	Choronic illness	Communi Functional	cative Literacy	Total of HL	
Material status	.40 *	.05	.05	-.31 *	.06	-.05	-.10	.04	.06	-.01
Gender	—	-.14 *	-.10	-.10	-.03	.12	-.15 *	.00	.01	-.08
Age		—	.09	-.17 *	-.10	-.06	-.10	.04	.09	.01
Child			—	-.17 *	-.10	-.02	-.03	-.15 *	-.16 *	-.17 *
Household composition				—	-.04	.06	-.11	.00	-.01	-.07
Health status					—	-.31 *	-.06	.11	.09	.07
Choronic disease						—	-.08	-.35 *	-.22 *	-.35 **
Functional							—	-.22 *	-.29 *	.32 **
Communicative								—	.75 *	.81 **
Literacy									—	.73 **

The t-test revealed that elderly individuals with chronic illnesses had higher levels of communicative HL ($t = 5.43$, $df = 218$, $p < .001$), critical HL ($t = 3.36$, $df = 218$, $p < .01$), and total HL ($t = 5.57$, $df = 218$, $p < .001$) than those with no illnesses (Table 6). Furthermore, elderly people with children had higher communicative HL ($t = 2.03$, $df = 176$, $p < .05$), critical HL ($t = 2.15$, $df = 176$, $p < .05$), and total HL ($t = 2.33$, $df = 176$, $p < .05$) than those without children (Table 7). Men showed greater levels of functional HL than women ($t = 2.21$, $df = 224$, $p < .05$), and subjects who were familiar with the use of the internet or smartphones also showed high functional HL level ($t = 4.12$, $df = 224$, $p < .001$) (Table 8). The presence of familiar supporters and

prior experience with nursing care had no effect on the HLS-14 score.

Table 6 t-test for choronice illness

	Presence		Absence		<i>t</i>	
	M	SD	M	SD		
Functional HL	19.54	4.36	18.75	5.20	1.12	
Communicative HL	16.02	4.47	12.23	4.63	5.43	***
Critical HL	12.00	3.39	10.20	3.68	3.37	***
Total of HL score	47.57	7.48	41.18	7.15	5.58	***

Table 7 t-test for child status

	Presence		Absence		<i>t</i>	
	M	SD	M	SD		
Functional HL	19.24	4.62	18.67	6.93	0.35	
Communicative HL	15.43	4.63	12.22	4.18	2.04	*
Critical HL	11.67	3.45	9.11	3.62	2.16	*
Total of HL score	46.34	8.00	40.00	6.18	2.34	*

Table 8 t-test for user of internet devices

	User		Non user		<i>t</i>	
	M	SD	M	SD		
Functional HL	20.52	4.10	18.10	4.72	4.12	*
Communicative HL	14.69	4.88	15.36	4.62	-1.06	
Critical HL	11.16	3.55	11.92	3.43	-1.63	
Total of HL score	46.37	8.20	45.38	7.49	0.95	

Discussion

We conducted a questionnaire survey to clarify the conditions of HL and the issues related to the support needed by the elderly, including the type of support resources required to obtain health information and the activities undertaken for health maintenance or health status.

We found that the HL scores of healthy elderly individuals were almost the same as those of elderly individuals > 65 years of age (Otsuka, et al., 2017). Moreover, most of the elderly utilized familiar support resources such as spouses and friends. A previous study also reported that elderly people also seek opinions from family members or friends (Kitada, Nakamura, & Yamashiro, 2015).

We found that communicative HL, critical HL, and total HL were higher in subjects with children and in those with chronic illnesses. Although $\geq 90\%$ subjects performed exercises, undertook volunteering activities, visited hospitals, talked with friends, and maintained healthy behaviors, <10% of the elderly collected health-related

information. Furthermore, relying on health professionals as information sources was noted in 20% of the subjects, whereas no relation was noted between HL and the recognition of health condition. The subjects also visited hospitals as a health maintenance behavior. Many subjects with chronic illnesses such as high blood pressure and diabetes considered themselves “healthy” enough to participate in the bowling competition. Considering that most subjects recognized that they were “healthy,” only a few of them felt the need to acquire knowledge from medical experts because they believed that the knowledge and information acquired from families, friends, and children were sufficient.

However, elderly people usually have severe/chronic diseases or a history of disease conditions; therefore, they require comprehensive support. Medical experts ensure that not only the elderly but also their families can contact experts who can help support the health behavior of elderly individuals. Moreover, it will be necessary to support the maintenance and improvement of HL, which can help acquire the correct knowledge and utilize the obtained information.

In this survey, approximately 50% of the subjects answered that they can utilize the internet or smartphones, and these subjects showed significantly high functional HL. Subjects with chronic illnesses were usually capable of obtaining health information via the internet. However, it was reported that elderly people who obtained information from books, magazines, and newspapers also tended to trust information from television media (Kitada, Nakamura, & Yamashiro, 2015). Therefore, the manner of information transmission for the elderly should be considered because medical staff does not distribute information only on the internet.

A previous study reported that participation in cultural activities such as going to cinemas, theaters, galleries, and museums, in addition to the use of the internet and participation in social activities, leads to the improvement of HL in elderly people (PLOS, 2014). The continuation of activities to maintain health and social interactions is one of the factors that affect life in advanced age (Koga & Takahata, 2014). Environments wherein elderly people can easily interact with one another (e.g., the bowling competition in this case) will be indispensable.

Considering that the elderly suffer from various diseases, it is necessary to increase their HL to ensure that they can maintain their health, acquire the correct knowledge, and transform health behavior after illnesses. Medical professionals also need to practice effective communication with the elderly to improve their HL and decision making with regard to the type of treatment or care they desire.

Conclusion

The elderly subjects evaluated in this study received information and made health-related decisions on the basis of their conversations with familiar families and friends. Information gathering using the internet and web devices is effective in maintaining health status; however, the elderly have high individuality of medical history and medical condition and are carefully supported by medical staff when required. Medical experts should ensure contact opportunities by including not only the elderly patient but also their families for appropriate information dissemination.

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