

# Pleasant Life Online and Offline: Implications for Understanding College Students' Virtual Lives

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**Abstract** -This study compares the online and offline pleasant life of college students in Taiwan. To achieve this goal, this study develops a Positive Psychology Scale (PPS) and Cyberspace Positive Psychology Scale(C-PPS) and administers them to a sample of 411 college students in Taiwan. Confirmatory factor analysis (CFA) was utilized to test the construct validity of the PPS and C-PPS, and the paired t-test was used to investigate the difference between the PPS and C-PPS scores.

The results of CFA show that the PLS and C-PLS measurement tools in this study show good reliability and validity. Analytical results also show that life satisfaction (pleasant life about the past) online is higher than that offline. However, the offline scores for positive emotion (pleasant life about the present) and optimism (pleasant life about the future) are higher than the online scores. The analytical results verify that virtual life is not only part of, but even the better part of, daily life for college students. Albeit, college students experience more positive emotion and more optimistic offline than online.

**Index Terms:** positive psychology, internet psychology, structural equation modeling.

## I. INTRODUCTION

Positive psychology (also called authentic happiness, [1]) is the scientific study of positive subjective experience, positive individual traits, and positive institutions.

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Positive psychology has three central concerns: the pleasant life, the engaged life, and the meaningful life [1] [2] [3]. The pleasant life involves contentment with the past, happiness in the present, and hope/optimism for the future. The engaged life consists of the study of strengths and virtues. The meaningful life entails the study of the strengths that foster better communities [1].

Positive psychology has thrived in the last several years [5]. To date, however, studies on positive psychology have limited themselves to the real world. Some studies argue that the virtual world also deserves the careful attention of educators and psychologists [2][3]. Cyberspace could be a place that fosters positive psychology and increases well-being. People who use the Internet to contact friends, expand their social networks, and search for information can perhaps increase their own emotional well-being or mental health.

Concerning the pleasant life, some Internet applications such as email, Skype, and MSN facilitate communication with others and expand real-world social networks to the virtual space. This extension of social involvement could increase psychological well-being. The Oxford Internet Survey [6] shows that most people think that the Internet has expanded their contact with their existing offline networks. About 15% of the subjects of that survey stated that access to the Internet has increased their contact with family and friends who live nearby, and 35% said it has increased their contact with family and friends who live farther away. To summarize, the Internet could be a space that fosters pleasant life.

College students form a noteworthy demographic of various Internet users. Compared to the general population, college students are usually early adopters and heavy users of the Internet. The Internet is a part of college students' daily routine, in part because they have grown up with computers and

the Internet. Besides, the Internet allows students to fulfill unmet psychological needs and to explore social connections, sexuality, and aspects of the hidden self [2].

In summary, the purpose of this study is to investigate the relationship between the pleasant life of college students online and offline. To achieve this goal, this study develops a Positive Psychology Scale (PPS) and Cyberspace Positive Psychology Scale (C-PPS) and administered both measures to a sample of 411 college students in Taiwan. Confirmatory factor analysis (CFA) was utilized to test the construct validity of the PPS and C-PPS, and the paired t-test was used to investigate the difference between the PPS and C-PPS scores.

## II. METHOD

The sample in this study includes 411 college students (male 52.1%, female 27.9%) recruited from four universities in northern and central Taiwan.

The PPS and the C-PPS measures in this study are primarily based on Seligman's definition of *positive psychology*, or *authentic happiness*. The PPS measures three main subscales (the Pleasant life, the Engaged Life, and the Meaningful Life) of positive psychology. The C-PPS includes the same items as the PPS with the exception that items in the C-PPS address the virtual life or cyberspace context instead of the real life context of the PPS.

Since this study mainly investigates the pleasant life, only the Pleasant Life Scale (PLS) and the Cyberspace Pleasant Life Scale (C-PLS) of the PPS and the C-PPS are analyzed in this study.

The PLS consists of the following sub-factors: positive emotions about the past (life satisfaction), the present (positive emotion), and the future (optimism). The PLS has 18 items in four-point Likert-type. As mentioned above, the item descriptions of C-PLS are identical except that the former addresses the real-life context, while the latter emphasizes a virtual-life context.

## III. RESULTS & DISCUSSION

### A. Psychometric Properties of the PLS and C-PLS

This section discusses the reliability (internal consistency) and construct (factorial) validity of the PLS and the C-PLS.

Confirmatory factor analysis (CFA) was performed to assess the construct validity of the PLS and C-PLS. Figures 1 and 2 present the analytical

results for CFA as provided by the statistical software LISREL 8.80.

To evaluate data-model fit, this study first examined overall model fit; that is, whether the model is theoretical meaningful. This study examined whether signs of paths are in opposite directions, whether all estimated parameters are statistically significant, and whether the errors are close to one. After checking the computer outputs, the overall model fit of the PLS and C-PLS were found both acceptable.

Next, formal statistical fit indices comprised model chi-square, Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA) were utilized in this study. Concerning the PLS, the model chi-square equals 434.03 ( $p < .05$ ). However, some problems exist when relying solely on chi-square as a fit statistics since large sample size will result in a high value of chi-square and model rejection [7]. The RMSEA of this model equals 0.075 ( $< .080$ ), indicating a moderate fit. Furthermore, the CFI = 0.979 ( $> .900$ ) and SRMR = .044 ( $< .100$ ), indicating that model fits well. To conclude, the data fit the hypothetical model well.

Regarding the C-PLS, although the model chi-square = 449.317 ( $p < .05$ ). The RMSEA of this model equals .077 ( $< .080$ ), indicating a moderate fit. Furthermore, the CFI = .958 ( $> .900$ ) and SRMR = .058 ( $< .100$ ), indicating that model fits well. To conclude, the data fit the hypothetical model well.

Given that the model fit wells prior to any modification, this study adopts the original PLS and C-PLS measures without any model trimming to retain the original factor structures. That is, both the PLS and C-PLS exhibit good factorial validity.

### B. The differences between online and offline pleasant life

According to Seligman's theory of positive psychology, the pleasant life consists of three main sub-scales: pleasant life about the past (life satisfaction), the present (positive emotion), and the future (optimism). The paired t-test was utilized to compare the differences among the total scores of the three subscales. Table 1 shows the analytical results.

The results show that life satisfaction (pleasant life about the past) online is higher than that offline ( $t = -2.19$ ,  $p < .05$ ). However, the offline scores for positive emotion (pleasant life about the present) and optimism (pleasant life about the future) are higher than the online scores ( $t = 3.30$ ,  $5.63$ , respectively,  $p < .01$ ).

Life satisfaction is person's cognitive evaluation of his or her life. Life satisfaction online is higher than that offline about the past, implying that for the sampled college students, cognitive evaluation of their online/virtual life is higher than offline/real life. That is, they view their on-line past life as being closer to their ideal than their actual life. Viewing from this, the conditions of online life are more excellent than offline. One possible reason is that these N(Net)-generation or D(digital)-generation college students, as Prensky [8] pointed out, are "Digital Natives." For these digital natives, cyberspace is part of everyday life and they have both virtual and real lives. N-generation students approach their life and their daily activities differently because of the Internet. These analytical results further verify that virtual life is not only part of, but even the better part of, past daily life for college students.

Scrutinizing the related questions on the scale, we propose the second possible reason that the Internet better allows college students to fulfill unmet needs and do whatever they want to do in the past virtual life. Those virtual fulfillments and allowance lead to their better evaluation about the pleasant life about the past online than offline.

However, regarding positive emotion, the sampled college students experience less positive emotion (such as being happy, content, inspired, joyful, accompanied, and involved) online than offline. One possible reason is that, although college students have both online and offline lives, they are quite happy about their college life presently; they are surrounded by teachers, classmates, roommates, and friends, and they are inspired by new learning and campus life. Although the Internet has brought them the pleasant life about the past, sampled college students expressed their more positive emotion about the present offline than online.

Another explanation is that the possible frustrations of Internet relationship, especially romantic relationship, result in college students' negative emotions. The Internet can be a tool for extending social networks and developing romantic relationships for college students, but developing new friendship online is not always smooth, real and without a hitch. In addition, cheating and lies occurred in online relationship formation are often heard on campus as well as in media coverage. College students may face interpersonal conflicts when they try to make friends online, thus experiencing negative emotion.

The third sub-scale in the PLS and C-PLS measurements deals with the students' evaluation of the pleasant life about the future, that is, optimism. The result indicated that their scores for the offline were

higher than online. This result implied that students are more optimistic about their future offline than online. It may be because that our samples are college students who were selected to receive post-secondary education, and thus have higher confidence and evaluation about their future in real live. Therefore, although they positively evaluated their pleasant online life about the future, they did even more positive toward their pleasant offline life about the future.

Theoretically, optimism consists of two related concepts: dispositional optimism and situational optimism. Dispositional optimism refers to a generally optimistic outlook on present and future events. Situational optimism, on the other hand, describes optimism about a specific event or situation. Therefore, one might be generally optimistic, but might be more pessimistic about the outcomes of a particular situation.

Following this concept, the difference between online and offline optimism results from situational optimism. Situational optimism is related to the level of control in a particular situation. Therefore, the level of control that one feels in cyberspace leads to lower situational optimism than that in real life for college students.

Some stigmas regarding the Internet, such as Internet addiction and Internet deception, may increase the tendency to think pessimistically. Especially when facing with these negative events, people tend to feel helpless and have no control over outcomes. Also, college students are inclined to be more affected by cyberspace negative events than real life did.

In summary, this study compares the online and offline pleasant life of college students in Taiwan. The results of CFA show that the PLS and C-PLS measurement tools in this study show good reliability and validity. The statistics results also show that college students' life satisfaction online is higher than that offline regarding their pleasant life about the past. However, they express more positive emotion (present) and optimism (future) offline than online. Future study may continue investigating college students' engaged life and meaningful life online as well as offline. The research efforts demonstrated in this study is the preliminary step towards understanding college students' happiness about their online and offline lives.

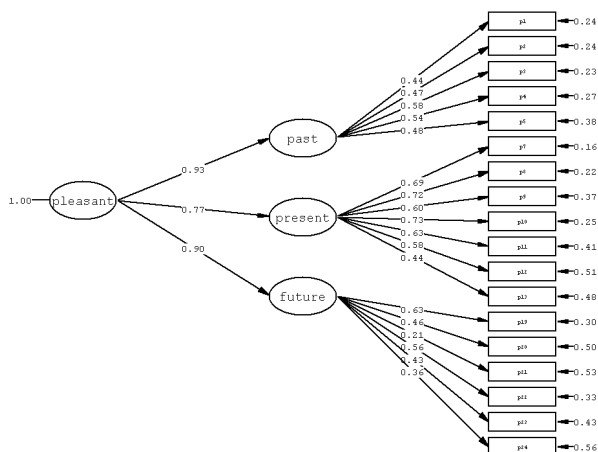


Figure 1: CFA on PLS with Standardized Solution

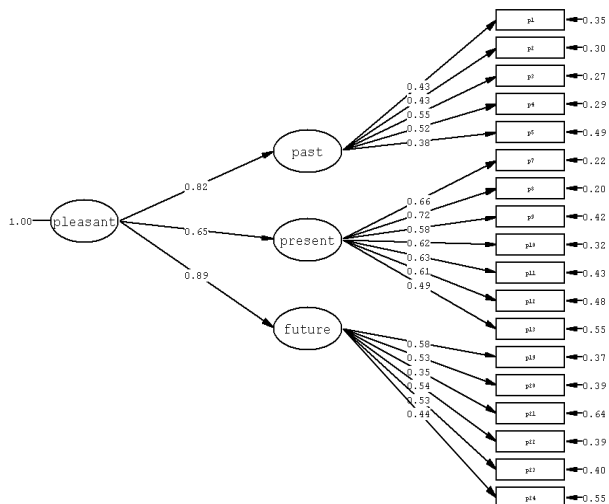


Figure 2: CFA on C-PLS with Standardized Solution

Table 1 : Results of Paired t-test

Paired-Variables	Mean <sup>1</sup>	SD	t	p-value
Satisfaction Offline	2.63	0.55	-2.19	.029
Satisfaction Online	2.70	0.53		
Positive Emotion Offline	2.70	0.66	3.30	.001
Positive Emotion Online	2.59	0.66		
Optimism Offline	2.86	0.53	5.63	.000
Optimism Online	2.72	0.57		

<sup>1</sup> based on a four-point Likert scale.

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