

Love-pursuing Patterns and Personality Traits: A Preliminary Study in Chinese University undergraduate Students¹

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Abstract

The love-pursuing pattern (LPP), or love-initiating behavior, is important in building or maintaining a relationship, but has been less studied. We hypothesize that the LPPs might be modulated by personality traits. Therefore we have administered an adjective-based LPP questionnaire, the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ), the Zuckerman Sensation Seeking Scales (SSS), and the Plutchik – van Praag Depression Inventory (PVP) in 164 Chinese undergraduates who were in a current heterosexual-love relationship. We did not find any differences of LPP, ZKPQ, SSS, or PVP scale scores when either referred to gender or initiator/ receiver. In initiators (13 women, 85 men), the SSS Experience Seeking was negatively correlated with LPP Impulsive scale, Disinhibition was positively correlated with Threatening scale, and the PVP was negatively correlated with Persistent scale. In all subjects, the ZKPQ Aggression-Hostility was negatively correlated with the perceived happiness from the relationship, Activity was positively correlated with relationship suitability, and the SSS Experience Seeking was negatively correlated with a future marriage probability. Low SSS Experience Seeking and Disinhibition, ZKPQ Aggression-Hostility, together with high Activity and emotionality would be helpful to initiate a love relationship, and increase chances of the perceived happiness and suitability, and a future marriage.

Keywords: Heterosexual, Love-pursuing pattern, Love relationship, Personality trait, Undergraduate student

Most people get married for love (Levine, Sato, Hashimoto, & Verma, 1995; Sprecher & Toro-Morn, 2002; Bradbury & Karney, 2004; Leone & Hawkins, 2006). However, the high divorce rate up to the last century suggests that people have difficulty in dealing with romantic affairs (Bumpass, 1990; Teachman, Tedrow, & Crowder, 2000),

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and the case might be even worse at the present time (Yu & Liu, 2007). Many factors contribute to love and marriage, for instance, physical appearance through which one attracts another, influences the manner of falling in love (Sangrador & Yela, 2000; Peretti & Abplanalp, 2004). Positive assessments of each other's generosity, honesty, kindness to children, respectfulness to parents, or intellectual integrity also contribute to falling in love (Fletcher, Simpson, Thomas & Giles, 1999; Miller, 2007). Besides, the love-initiating behavior, or the love-pursuing pattern (LPP), a systemic fashion of revealing oneself to another by his/her intimate feelings, attitudes and experiences, by following or chasing him/ her in order to achieve love, is responsible for building a love relationship and influence its quality (Sprecher & Hendrick, 2004; Levine, Aune, & Park, 2006; Shaver & Mikulincer, 2006).

Normally, with a love desire, the active people, i.e., the initiator in this study, who started to pursue a love, use different LPPs to express intentions to their potential counterparts, the passive people, i.e., the receiver, who answered the love that the initiator had expressed. The receivers, on the other hand, would give a general consideration as whether to accept or decline the love offer (Robins, Caspi, & Moffitt, 2000; Barelds, 2005). In heterosexual couples, a proper love way leads to a happy relationship, otherwise a bad one (Hecht, Marston, & Larkey, 1994). Indeed, the success or failure of this process may create or eliminate the potential for the subsequent relational escalation (Levine et al., 2006).

On the other hand, personality variables (or traits) contribute to the love styles and intimacy (White, Hendrick & Hendrick, 2004; Shiota, Keltner, & John, 2006), and the effect is prospectively across time (Bradbury, Campbell, & Fincham, 1995; Caughlin, Huston, & Houts, 2000; Donnellan, Larsen-Rife, & Conger, 2005). Personality traits are also associated with the relationship satisfaction, and might act as more salient predictors of marital outcome. For instances, investigators have demonstrated that Neuroticism was negatively associated with and predictive of satisfaction and intimacy, and Extraversion and Agreeableness were positively associated with relationship satisfaction and intimacy, especially for males (Karney & Bradbury, 1997; White et al., 2004; Fisher & McNulty, 2008). Others studies have shown that sensation seeking influences the assortative mating (Lesnik-Obeststein & Cohen, 1984; Glicksohn & Golan, 2001) and such a trait is negatively correlated with a relationship satisfaction (Thornquist, Zuckerman, & Exline, 1991; Henderson, Hennessy, Barrett, et al., 2005). However, besides a few study shows that personality traits are associated with mate

selection (Barelds, 2005), no other studies address the role of the personality traits in the LPPs. Personality determines how a subject is to interpret things that happen around them (Narud & Dahl, 2002), investigations concerning personality traits and LPPs therefore might enrich the cognitive-behavioral theory that contributes to the interpersonal perspectives of romantic relationship (Collins, Welsh, & Furman, 2009).

The purposes of the present study are to figure out which personality traits are responsible for the LPPs, and what are relationships between personality traits or the LPPs and the evaluation of the current love relationship. From the preliminary results of our lab, we developed an adjective-based questionnaire to measure the LPPs, which includes scales of the Persistent, Frank, Shy, Impulsive and Threatening. In addition, we used the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ, Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993) to measure the personality traits, and the Zuckerman Sensation Seeking Scales (SSS, Zuckerman, 1979) to measure the sensation seeking trait in particular. One reason to apply these questionnaires is that the ZKPQ is one of the standardized models (an alternative model) of the five-factor personality. Meanwhile, according to our hypothesis, two other reasons are that ZKPQ Impulsive sensation seeking trait or SSS might be correlated with the LPP Impulsive scale, and SSS Disinhibition subscale, which relates closely to the sexual activity, might especially bind to the pursuing of a romantic relationship.

Although many romantic couples experience that the attraction and the love-pursuing are mutual, here in our study, we selected only pure initiators or receivers, since we speculated that, during initiating period, love-crave behavior would be a personality-driven, or strongly trait-related one, and started from one-side. Moreover, since romantic partner selection was correlated with depression level (Simon, Aikins, & Prinstein, 2008), we measured the depressive tendencies of our subjects using the Plutchik – van Praag Depression Inventory (PVP, Plutchik & van Praag, 1987).

Methods

Participants

One hundred and sixty-four Chinese university undergraduates from Zhejiang Province, China were recruited in our study. They were ascertained to be in a current heterosexual love relationship, whether cohabiting with a love-partner or not. A student who actively initiated the love relationship was considered as an initiator, and his/ her

love counterpart as a receiver. Therefore, subjects were divided into four groups: the female initiators ($n = 13$, mean age: 19.92 years old \pm 1.04 SD, age range: 18-22), the male initiators ($n = 85$, 20.78 \pm 1.33, 18-26), the female receivers ($n = 54$, 20.56 \pm 1.16, ranged 18-24), and the male receivers ($n = 12$, 20.68 \pm 1.15, 19-22). Subjects' ages were not statistically significant different between groups ($F [3,160] = 1.86$, $p = .14$).

Measures

Four self-rated questionnaires regarding the LPPs, personality and depressive mood, were administered in each subject.

A) the Love-pursuing Pattern (LPP) Questionnaire. This questionnaire is an adjective-based one. In the beginning, five members (two women and three men; 3 Ph.D. holders, 2 M.Sc. holders) served as judges. Adjectives had to fit the stem sentence like "I was [adjective] when I expressed my love to her/him." or "He/She was [adjective] when he/she expressed his/her love to me." One judge selected 50 adjectives from *The Modern Chinese Dictionary and Its Supplements* (Beijing, The Commercial Publishing House, 1998) and *A Chinese English Dictionary, Revised Edition* (Beijing, Foreign Language Teaching and Research Press, 1995). The 50 words were then handed over to the other four judges for further evaluation. If an adjective was evaluated as a non-frequently used one by more than three judges, it would be skipped. Finally, the remaining words had to be brought to all the five judges for the final decision before being listed to the word pool. All synonyms which were aggregated, the awkward, less-frequently used or slang adjectives were dropped. The resulting 20 adjectives were considered exhaustive since no new words could be added. Finally, these words were checked and approved by another two of us to form the current questionnaire, which measures five LPPs: Persisting, Frank, Shy, Impulsive and Threatening. Each pattern was described by four adjectives (Table 1). The Likert-type rating scale was used: 1 – very unlike me, 2 – moderate unlike me, 3 – somewhat like and unlike me, 4 – moderate like me, 5 – very like me.

B) the Zuckerman–Kuhlman Personality Questionnaire (ZKPQ, Zuckerman et al., 1993). One point is given to each chosen item corresponding to personality traits. The test provides five measurements: (a) Impulsive Sensation Seeking (19 items), composed of two subunits, i.e. eight items of impulsivity and 11 items of general sensation seeking; the internal reliability of the scale was .70 in the current sample. (b)

Neuroticism-Anxiety (19 items), its internal reliability was .80. (c) Aggression-Hostility (17 items), its internal reliability was .67. (d) Activity (17 items), its internal reliability was .64. (e) Sociability (17 items), its internal reliability was .70. In this questionnaire, 10 items of another scale of dissimulation (infrequency or lie) were randomly inserted into the test body. Any score above 3 on the infrequency scale suggests either inattention to the content of the items and acquiescence or a very strong social desirability set; therefore, the infrequency scale was used as a test validity indicator for individuals (Zuckerman et al., 1993). The test has proved to be reliable in Chinese culture (Wu, Wang, Du, Li, Jiang & Wang, 2000).

Table 1. Items of the Love-Pursuing Pattern questionnaire

Scale	Chinese	English Translation
Impulsive	毛躁的	careless
	草率的	sloppy
	鲁莽的	rude
	轻浮的	frivolous
Persistent	坚韧不拔的	persistent
	不屈不挠的	indomitable
	持之以恒的	persevering
	有意志力的	will-powerful
Frank	坦率的	frank
	风趣的	humorous
	急性子的	impatient
	直爽的	straightforward
Threatening	恐吓的	threatening
	威胁的	menacing
	胁迫的	coercive
	以死相逼的	intimidating with suicidal attempt
Shy	害羞的	shy
	笨拙的	Awkward
	含蓄的	Implicit
	拘束的	restricted

C) the Zuckerman Sensation Seeking Scales (SSS, form V, 40 items) (Zuckerman, 1979). One point is given for each chosen item corresponding to sensation seeking.

The test provides four scales of 10 items each, i.e., Disinhibition (its internal reliability was .56 in the current sample), Thrill and Adventure Seeking (internal reliability was .76), Experience Seeking (internal reliability was .61) and Boredom Susceptibility (internal reliability was .59). The Total score in each subject was also calculated as the sum of the four scale scores. The test has proved to be reliable in Chinese culture (Wang, Wu, Peng, et al., 2000).

D) the Plutchik – van Praag (PVP) Depression Inventory contains 34 items; each item has three scale points (0, 1, 2), which correspond to the increasing depressive tendencies. Subjects are rated “possible depression” if they score between 20 and 25, or “depression” if they score more than 25. The internal reliability of this inventory is .93 (Plutchik & van Praag, 1987).

In addition to these questionnaires, subjects were asked to judge (a) the LPP suitability when the love was initiated (SUIT); (b) the happiness perceived when conducting the current love relationship (HAPP); (c) the probability of a future marriage regarding the current relationship (PROB), using the scale: 1 – very unsuitable/ unhappy/ improbable, 2 – moderately unsuitable/ unhappy/ improbable, 3 – somewhat unsuitable/ unhappy/ improbable and somewhat suitable/ happy/ probable, 4 – moderately suitable/ happy/ probable, 5 – very suitable/ happy/ probable.

Data Analyses and Statistics

Answers to the 20 adjectives of the LPP questionnaire in all subjects were submitted to a principal component analysis. The factor loadings were rotated orthogonally using the varimax normalized methods. The internal reliability (the Cronbach alpha coefficient) of each scale was calculated.

In all the four groups, the mean scores of ZKPQ and SSS scale scores were compared with 2-way ANOVA, that is, group (4) x trait (5). If main effects were detected, post-hoc analysis by Duncan’s multiple new range test was then employed to evaluate between group differences for all given scales. The mean scores of PVP, SUIT, HAPP and PROB were compared with 1-way ANOVA plus Duncan’s test. Spearman’s rank order correlation was used to search for possible relations among subjects’ ages, ZKPQ, SSS, and PVP scale scores. A step-by-step multiple regression was performed between the ZKPQ, SSS and PVP scale scores and SUIT, HAPP and PROB scores.

In the two initiator groups, mean LPP scale scores were compared with 2-way ANOVA plus Duncan's test. A step-by-step multiple regression was performed between the ZKPQ, SSS and PVP scale scores and the LPP scale scores. In the two receiver groups, mean LPP scale scores (of the respective initiators', but perceived by the receivers) were compared with 2-way ANOVA plus Duncan's test. A P value less than or equal to .05 was considered to be significant.

Results

When the four groups were compared together, there were no statistically significant between-group differences when the mean scores of ZKPQ ($F [3,160] = .03$, $p = .99$) or SSS ($F = 1.37$, $p = .25$) scales were considered. PVP scores were not significantly different between groups ($F = .53$, $p = .66$) (Table 2). Nor were the mean scores of SUIT ($F = .67$, $p = .76$), HAPP ($F = .84$, $p = .47$), or PROB ($F = .68$, $p = .59$) (Table 3). There was no correlation between subject's age and ZKPQ, SSS or PVP scores in all 143 subjects. By contrast, the ZKPQ Aggression-Hostility was negatively correlated with HAPP (adjusted $R^2 = .06$, $\beta = -.27$, $p < .05$); Activity was positively correlated with SUIT (adjusted $R^2 = .06$, $\beta = .24$, $p < .05$); and the SSS Experience Seeking score was negatively correlated with PROB (adjusted $R^2 = .05$, $\beta = -.25$, $p < .05$).

Table 2. Scale scores (mean \pm S.D.) of the Zuckerman-Kuhlman Personality Questionnaire, the Zuckerman Sensation Seeking Scales, and the Plutchik-van Praag Depression Inventory (PVP) in four groups of subject.

	Initiators		Receivers	
	Women (n = 13)	Men (n = 85)	Women (n = 54)	Men (n = 12)
The Zuckerman-Kuhlman Personality Questionnaire				
Impulsive Sensation Seeking	9.6 \pm 3.10	8.62 \pm 3.80	9.09 \pm 3.26	9.01 \pm 3.04
Neuroticism-Anxiety	9.62 \pm 5.42	7.19 \pm 4.09	9.31 \pm 3.76	9.34 \pm 2.73
Aggression-Hostility	5.31 \pm 2.84	6.21 \pm 3.13	5.95 \pm 2.54	4.83 \pm 3.01
Activity	6.62 \pm 2.74	7.69 \pm 3.28	7.43 \pm 2.77	7.29 \pm 3.67
Sociability	7.31 \pm 3.77	8.39 \pm 3.38	7.04 \pm 3.02	8.15 \pm 3.10
The Zuckerman Sensation Seeking Scales				
Thrill and Adventure Seeking	6.23 \pm 1.92	6.48 \pm 2.33	6.13 \pm 2.53	6.38 \pm 2.19
Experience Seeking	4.85 \pm 2.58	3.96 \pm 1.80	4.30 \pm 1.92	3.44 \pm 1.62
Disinhibition	3.54 \pm 2.37	3.95 \pm 1.95	2.67 \pm 1.45	4.15 \pm 1.34
Boredom Susceptibility	2.31 \pm 1.49	2.29 \pm 1.40	2.00 \pm 1.49	2.31 \pm 1.06
TOTAL	16.92 \pm 6.44	16.69 \pm 4.60	15.10 \pm 4.9	16.34 \pm 2.90
PVP	11.69 \pm 8.30	10.27 \pm 7.34	11.43 \pm 6.93	12.45 \pm 9.26

Table 3. Scores (mean \pm S.D.) of the suitability of love-pursuing pattern, the perceived happiness, and the probability of a future marriage in regard to the current relationship in four groups of subject.

	Initiators		Receivers	
	Women (n = 13)	Men (n = 85)	Women (n = 54)	Men (n = 12)
Love-pursuing pattern suitability	3.54 \pm 0.97	3.64 \pm 0.81	3.72 \pm 0.76	3.75 \pm 0.94
Perceived happiness	3.92 \pm 0.95	3.66 \pm 0.85	3.57 \pm 0.89	3.44 \pm 0.90
Probability of a marriage	2.92 \pm 1.26	3.16 \pm 1.14	3.11 \pm 1.30	3.55 \pm 1.31

For LPP item scores, the principal component analysis extracted five factors with eigenvalues of 4.65, 2.85, 2.03, 1.81, 1.13 respectively. The scree plot also suggested that the first five factors accounted for 62.37 % of the total variance. We named the five LPP scales as Impulsive, Persistent, Frank, Threatening, and Shy. The internal alphas of these five LPP scales were .81, .86, .43, .72, and .66 respectively. Answers to the LPP Frank scale displayed little variation, which resulted in the lower alpha for it. In the two initiator groups, the LPP scale scores were not statistical-significantly different from each other ($F [1,96] = 2.22, p = .14$). In the two receiver groups, the LPP (perceived) scale scores were not statistical-significantly different from each other either ($F [1,64] = 1.17, p = .28$) (Table 4).

Table 4. Scale scores (mean \pm S.D.) of the love-pursuing pattern scales in the initiators, and of the perceived love-pursuing pattern scale in the receivers. Scores in the initiators and receivers were analyzed separately.

	Initiators		Receivers	
	Women (n = 13)	Men (n = 85)	Women (n = 54)	Men (n = 12)
Impulsive	8.38 \pm 4.35	6.48 \pm 2.74	6.24 \pm 2.45	6.84 \pm 3.16
Persistent	10.38 \pm 4.29	14.36 \pm 3.26	13.13 \pm 3.82	12.75 \pm 3.93
Frank	11.62 \pm 3.07	13.24 \pm 2.43	11.87 \pm 2.53	12.54 \pm 2.35
Threatening	5.15 \pm 1.41	4.76 \pm 1.56	4.61 \pm 1.48	5.34 \pm 2.63
Shy	10.23 \pm 2.45	9.73 \pm 2.99	10.85 \pm 3.32	11.85 \pm 4.56

When the 98 initiators were joined together, SSS Experience Seeking was negatively correlated with the LPP Impulsive scale (adjusted $R^2 = .08$, beta = $-.25, p < .05$), Disinhibition was positively correlated with Threatening scale (adjusted $R^2 = .09$, beta = $.29, p < .05$). In addition, PVP score was negatively correlated with Persistent scale (adjusted $R^2 = .09$, beta = $-.29, p < .05$).

Discussion

For the structures of our LPPs, we found clearly five factors namely the Impulsive, Persisting, Frank, Threatening, and Shy. We did not find any group or gender differences when referring either to the pattern, personality trait or depressive mood. However, SSS Experience Seeking was negatively correlated with the LPP Impulsive, Disinhibition was positively correlated with Threatening, and the depressive mood was negatively correlated with Persistent in the initiators. The ZKPQ Aggression-Hostility was negatively correlated with the perceived happiness from the relationship, Activity was positively correlated with the suitability evaluation of the LPPs, and the Experience Seeking was negatively correlated with the future marriage probability from the relationship in all subjects. According to our knowledge, our study is the first one to address the possible role of personality traits in the LPPs. However, the sample sizes of female initiators and male receivers in our study were relatively small, larger samples are further needed in order to present a clearer relationship between LPP and personality traits.

ZKPQ traits were not correlated with the LPP scales, however, the SSS Experience Seeking and Disinhibition were correlated with some LPP scales in the initiators. Experience Seeking represents the seeking of experience through the mind and senses, travel, and a nonconformist life-style (Zuckerman, 1979), while the Impulsivity often represents a lack of planning and tendency to act impulsively without thinking, and without experience seeking (Zuckerman et al., 1993). Although LPP Impulsive is somewhat different from the ZKPQ Impulsive sensation seeking, such explanations would account for the negative correlation between Experience Seeking and the LPP Impulsive scales. On the other hand, Disinhibition represents the desire for social and sexual disinhibition or release as expressed in social drinking, partying, and variety in sexual partners (Zuckerman, 1979), and is co-loaded with antisocial traits (Ke, Ye, Xu, et al., 2007). Other studies have shown that the disinhibition behavior was characterized by an apparent reduction in concerns for self-esteem and the judgment of others (Joinson, 1998), and the self-esteem was negatively linked to manic love (Campbell, Foster, & Finkel, 2002). The LPP Threatening expresses a possessive, irrational desire of love, which is quite similar to the mania style of love (Hendrick & Hendrick, 1986; Hans, 2008), and often considered to have selfish and antisocial trends (Worobey, 2001; Wan, Luk, & Lai, 2000). These studies help to understand the

positive correlation between Disinhibition and LPP Threatening found in the initiators. Nevertheless, we should note that we did not record the duration of the current love relationship, therefore, whether the correlations found in the present study was free from such a duration effect remains unanswered. Whereas, the current study was cross-sectional, a longitudinal design concerning the LPP and marital predictions would be worthwhile.

The depressive mood was negatively correlated with the LPP Persisting scale in the initiators is also in accordance with the previous studies. For instances, people expressing high persistence often score high on Conscientiousness (Engel, Olson, & Patrick, 2002), and the latter is most strongly sought in long-term mates (Botwin, Buss, & Shackelford, 1997; Berry & Miller, 2001; Donnellan, Conger, & Bryant, 2004; Ozer & Benet-Martinez, 2006) and demands high emotionality or passion (Marston et al., 1987; Shiota et al., 2006), while the depressed people often show less interest to the things around, including seeking the company of happy people (Horowitz et al., 1991; Rosenblatt & Greenberg, 1991; Lethbridge & Allen, 2008).

Our study has also demonstrated that some personality traits were connected with the happiness perception and a future marriage probability in regard to the current relationship. Indeed, an aggressive ferocity easily harms an interpersonal or love relationship (Oliver & Sedikides, 1992; Taft, Tones, Panuziom, et al., 2006), while the positive characteristics or emotionality contribute to the happiness and the relationship fostering over a long period of time (Robins et al., 2002). These studies support our results that ZKPQ Aggression-Hostility was negatively correlated with HAPP. When referring to the love theory, persons high in Conscientiousness are also reliable and stick to greater commitment, and individuals in a fluctuating state report lower commitment (Arriaga, 2001; Engel et al., 2002; Shiota et al., 2006). In another study (Wang, Hu, Mu, et al., 2003), Activity and Conscientiousness were co-loaded together. Therefore, we might speculate that people with high Activity are persistent in pursuing a relationship which they think suitable. On the other hand, individuals high in SSS Experience Seeking seem to be very susceptible to the experience and are willing to be in an altered state of consciousness (Zuckerman 1979; Glicksohn, 1991). However, marriage is a serious promise and represents a consciousness for the other person for a life (Thomson & Colella, 1992). Other studies have shown that SSS, especially Experience Seeking was negatively correlated with a measure of relationship satisfaction (Thornquist et al., 1991; Henderson et al., 2005). All these points might

underline the negative correlation between Experience Seeking and the prediction of a future marriage.

In conclusion, for the initiators, the initiation of a satisfactory love relationship is connected with low SSS Experience Seeking and Disinhibition, ZKPQ Aggression-Hostility, but high Activity and emotionality or passion. These characteristics would also enhance the probability of a future marriage in regard to that relationship.

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