The Intimacy Trap: PUA Based on Personal and Relational Perspectives a Qualitative Study of Relationships—An Arsenic "Love"

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Abstract: Drawing from qualitative methodology, this study employs semi-structured interviews to investigate the evolution and personality traits associated with PUA (Pick-Up Artistry), focusing on young individuals with firsthand experience. The research scrutinizes PUA through two principal lenses: relationship development and inherent personality traits. Key stages in relationship development were identified, each characterized by specific behavioral categories: early (social opportunities, participatory interaction, goal involvement), middle (relationship entitlement, waning efficacy, encouragement of sacrifice), and late (life entanglement, regretful actions). Additionally, three salient personality traits were discerned: emotional deprivation, low tolerance, and self-inefficacy. The study aims to elucidate the underlying mechanisms of PUA, thereby offering insights to help victims disengage from such relationships and mitigate the risks of similar detrimental interpersonal engagements.

1. Reasons for research

Initially conceived in the United States, the notion of Pick-Up Artistry (PUA) gained traction in China in 2008 as a method for fostering relationships with the opposite sex through strategic and psychological maneuvers. However, its application has since evolved into generating dysfunctional intimate relationships, earning it a pejorative reputation for emotional manipulation and control within romantic dynamics.

A prevalent PUA strategy, known as the "five-step trap," employs psychological tactics to elicit a sequence of curiosity, exploration, fascination, destruction, and ultimately emotional abuse in the victim. These manipulative techniques can lead to emotional disarray, rendering the victim susceptible to irrational behavior.

The demarcation between a PUA relationship and a conventional one can be nebulous. For instance, consider a case where one partner's seemingly affectionate behaviors later transmute into belittling comments that erode the other's self-worth. Where does one draw the line between a toxic relationship and one characterized by PUA strategies?

Research suggests that PUA susceptibility correlates with traits like low self-esteem, introversion, insecure attachment, and conformity predisposition. Self-differentiation levels also impact intimate relationship quality; lower levels increase manipulation vulnerability. This prompts inquiries into

what factors define a relationship's nature: Is it determined by one party's emotional oppression or manipulation? Or does it hinge on the other party's motives and objectives? Could specific characteristic behaviors be the key?

Prompted by a surge of PUA cases reported on social media, our study aims to delve into the complexities of PUA relationships. Specifically, we seek to comprehend the psychological and external factors that predispose individuals to become ensnared in such detrimental relational dynamics. Employing interviews as our methodological approach, we explore both the evolutionary aspects of PUA relationships and the intrinsic personality traits that make individuals vulnerable to them.

2. Research Process

2.1 Research Sampling

In the present study, we employed purposive sampling, utilizing rigorously validated instruments—the PUA Vulnerability Scale and the PUA Relationship Characteristic Expression Scale—to identify interview subjects. These scales, refined through five iterations and demonstrating high reliability, were disseminated to pinpoint young individuals with substantial firsthand experience in PUA behaviors. Comprehensive details of these scales are provided in the Appendix. Notably, both scales exhibited internal consistency coefficients exceeding 0.9 and were expert-reviewed for robust internal and structural validity.

Diverging from conventional statistical sampling grounded in probabilistic principles, our approach was guided by theoretical saturation. We employed intensity sampling to select cases with rich informational content and high variability, ensuring a comprehensive understanding of the studied phenomenon. Ultimately, a cohort of 10 interviewees was curated, comprising one male and nine females, all of whom were students at varying academic levels. Among these, nine self-identified as victims of PUA behaviors, while one was categorized as a PUA perpetrator.As shown in Table 1.

Table 1: Interviewee Basic Information

Number	gender	Education background	Relationship status	Duration of relationship	Dating times
1	Male	Graduate student	In relationship	More than 1 year	3-4
2	Female	Undergraduate student	Single	Less than 1 year	
3	Female	Undergraduate student	In relationship	1 month	7
4	Female	Graduate student		Less than 1 year	
5	Female	Undergraduate student		4 months	3
6	Female	College student		From childhood	
7	Female	Graduate student			
8	Female	Undergraduate student	In relationship	3 years	2
9	Female	Graduate student		More than 1 year	2
10	female	Undergraduate student	In relationship		1

2.2 Data Collection

For data gathering, this study employed semi-structured interviews, a method that allows for focused discourse on the research topic while also capturing the nuanced emotional and psychological states of the interviewees. This approach minimizes the risk of discomfort or abrupt interview

termination due to emotional distress. Preliminary to the formal interviews, an interview outline was crafted based on literature reviews and preliminary questionnaire analyses.

The formal interview sessions were bifurcated into online (via Tencent conference) and in-person formats. The interview outline was segmented into three temporal phases: pre-relationship, during the relationship, and current sentiments. This framework aimed to construct a comprehensive profile of both PUA victims and perpetrators as well as the dynamics of their relationships.

The interview process spanned two weeks, with duration of 53min for interviewee #1; 105min for interviewee #2; 53min for interviewee #3; 28min for interviewee #4; 32min for interviewee #5; 19min for interviewee #6; 51min for interviewee #7; 31min for interviewee #8; 42min for interviewee #9; and 47min for interviewee #10. Respondent No. 9 lasted 42min; Respondent No. 10 lasted 47min. Following informed consent, all sessions were audio-recorded and subsequently transcribed for data analysis.

2.3 Analysis of Information

2.3.1 Open Coding

By analyzing, testing, comparing, generalizing, and summarizing the existing data, the scattered information is organized and converged. After several analyses and interpretations, the case data are converted into a series of codes and compared with relevant labels to construct new concepts and original categories, and these codes and concepts are named concerning previous studies.

After passing the first round of open coding, a total of 50 open-coded nodes were obtained at 5 levels.

2.3.2 Spindle Coding and Selective Coding

Table 2: Encoding of PUA Relationship Development Process

Level 3 coding	Secondary coding	Connotation	Level 1 Code
A1 Social opportunities	Aa1 Self-construction	Learn from others' experiences and skills, strategically describe or showcase one's own skills and achievements, release false value signals.	aa1 Impression management
	Aa2 Environmental perception	Adopt a "casting a wide net" social expansion strategy, actively search for potential targets in the environment, and document their information and preferences.	aa2 Social circle expansion
			aa3 Target identification
A2 Interactive participation	Aa3 Emotional supply	Use the format of "facts-feelings-comparisons" to find positive self-concept parts of the target and sincerely praise them.	aa4 Emotional value provision
	Aa4 Interactive guidance	Utilize external stimuli elements that can trigger romantic emotions in the scene to anchor feelings of excitement, encourage the target to participate in highly interactive projects, and stimulate emotional sharing during the participation process.	aa5 Scene design
A3 Involvement in goals	Aa5 Cognitive involvement	Construct non-emotion-oriented connections to hide needs (such as if the target is cautious), frequently but not excessively contact with the target, timely introduce external evidence to enhance positive evaluations of the target's cognition.	aa6 Rationalized connection
			aa7 Repetitive exposure
	Aa6 Emotional involvement	Use self-disclosure, physiological arousal, and additional commitments to stimulate emotional responses from the target.	aa8 Physiological induction
			aa9 Additional commitment

Level 3 coding	Secondary coding	Connotation	Level 1 Code
B1 Relationship power	Bb1 Rule dominance	Lead mutual power and obligations division in psychological contracts between both parties while supplementing existing rules under selfish beliefs at any time.	bb1 Rights and responsibilities determination
			bb2 Autonomous discretion
	Bb2 Status consolidation	Consolidate one's relative position in relationships by reducing personal investment and lowering alternative choices available to the target.	bb3 Reduced investment
			bb4 Social isolation
			bb5 Spreading rumors externally
	Bb3 Control	Demand that partners engage in activities according to one's own wishes; monitor partners' actions and thoughts.	bb6 Physical coercion/physical harm behavior
			bb7 Mental control
			bb8 Behavioral control
B2 Weakening of effectiveness	Bb4 Value negation	Lower partner's self-perceived value; do not acknowledge their efforts or provide negative evaluations; trigger their self-deprecation.	bb9 Mental suppression
			bb10 Denial of partner's efforts
	Bb5 Moral evasion	Subjectively redefine responsibility for consequences of one's behavior; reduce identification with partner's pain.	bb11 External attribution
			bb12 Rationalization of harm
	Bb6 Low partner support	Do not provide supportive emotional feedback within intimate relationships.	bb13 Decreased achievement motivation
			bb14 Cold treatment/cold violence
			bb15 Low partner support
B3 Encouragement of sacrifice	Bb7 Approach-oriented sacrifice	Exaggerate personal contributions to evoke compensatory psychology from partners; report higher relationship satisfaction or upgrade commitments when partners make sacrifices.	bb16 Stimulating compensatory psychology
			bb17 Guiding sacrificial behavior
	Bb8 Avoidance-oriented sacrifice	Display low acceptance and tend towards hostile explanations regarding certain aspects of partners. Emphasize inequality between both parties; use intimidation or threat strategies, employ coercive measures to force concessions from partners so they recognize imbalance in contributions as reasonable.	bb18 Low receptivity performance
			bb19 Hostile interpretation tendency
			bb20 Victim instrumentalization
			bb21 Imbalanced effort expenditure

Level 3 coding	Secondary coding	Connotation	Level 1 Code
C1 Life involvement	Cc1 Social obstacles	Obstruct victim-survivor connections through methods such as defamation, spreading rumors, direct intervention.	cc1 Defamation against others
			cc2 Interfering with the victim entering new relationships
	Cc2 Life interference	Continuously attract the victim's attention through words or actions; disrupt their daily life.	cc3 Harassment
			cc4 Verbal abuse
C2 Regret behavior	Cc3 Compound begging	Desire to pull the victim back into the relationship using extreme behaviors deviating from normal conduct, such as begging for forgiveness, self-harm, pleading, and submission.	cc5 Begging in a low posture

Using the "Grounded Theory" approach, interview recordings are transcribed and conceptualized. Following open coding, spindle coding was employed to reorganize the data and deeply investigate the logical relationships among various open codes. Utilizing a "causal condition - phenomenon - action strategy - result" framework, the study effectively identified and elucidated the logical interconnections between initial open-coded concepts and categories. This led to a further decomposition into primary, secondary, and tertiary dimensions, details of which are tabulated in the subsequent section.

In the designated Figure 1, Dimension A pertains to the phase before entering the PUA relationship; Dimension B relates to the period during the PUA relationship; and Dimension C focuses on the post-relationship stage. Dimensions D and E, respectively, represent the personal characteristics of PUA victims and perpetrators. As shown in Table 2.

Table 3: Encoding of Personal Characteristics of PUA Relationship Participants

Three-level coding	Secondary coding	Connotation	Level 1 Code
D1 Lack of love	Dd1 Lack of social relationships	Lack of social support, relatively impoverished life, failure to establish strong relationships with others.	dd1 Lack of social support
			dd2 Boring/unfulfilling life
	Dd2 Emotional dependence	Easily invest emotions for a long time in the same person or relationship.	dd3 Deeply affectionate and devoted
			dd4 Dependence on others
	Dd3 Low self-concept and evaluation	Limited social activities, concerned about others' opinions, tend to underestimate oneself, lack of security.	dd5 Introverted
			dd6 Inferiority complex
			dd7 Sensitivity
	Dd4 Relationship fantasy	Desire to establish unrealistic intimate relationships with others or hold unrealistic hopes and unshakable trust in the other party.	dd8 Fantasizing

Three-level coding	Secondary coding	Connotation	Level 1 Code
E1 Low tolerance ability	Ee1 High concealment tendency	Display behaviors or attitudes that do not match one's own personality, shape an image to gain sympathy, support or recognition from a partner, etc.	ee1 Hypocrisy
	Ee2 Avoidance of responsibility	Failure to take responsibility in the relationship and avoid facing and solving problems.	ee2 Avoiding responsibility
E2 Self-deficiency	Ee3 Egocentrism	Often self-centered, affirming one's own actions and attitudes while disregarding or belittling others' thoughts.	ee3 Self-centeredness
			ee4 Strong desire for control
			ee5 Arrogance/self-importance
	Ee4 Low emotional self-control	Large emotional contrasts and fluctuations; prone to experiencing two opposing and intense emotions; sudden transitions that are unpredictable.	ee6 Emotional polarization
		Easily irritable or mentally distressed; unable to live a fulfilling life without specific individuals.	ee7 Mental distress

3. Results

3.1 Personal Trait Dimensions

3.1.1 Personality Trait Analysis of PUA Victims

Upon examining the self-narratives of PUA victims, it becomes clear that these individuals often lack social support and lead unfulfilled lives. They are deeply affectionate, loyal, dependent on others, introverted, insecure, sensitive, and prone to fantasy. This analysis reveals secondary traits: a deficiency in social relationships; emotional dependence; low self-esteem; and relationship fantasies. Their primary characteristic is a longing for love and emotional warmth. Our research paints a picture of PUA victims as sensitive and kind-hearted individuals with delicate personalities who tend to be naive. In their interactions with others they are friendly and generous - always giving more than receiving. When faced with problems they often blame themselves first while showing understanding towards others - frequently prioritizing other people's feelings over their own emotions. Their desire for long-term positive relations makes them vulnerable targets for PUAs.As shown in Table 3.

Social Support and Emotional Dependence: Social support, an interaction providing understanding and assistance, is a crucial factor for mental well-being[1]. PUA victims often perceive lower levels of social support, exacerbating their relationship anxiety, and leading to an aloof relationship with others[2]. Moreover, PUA perpetrators deliberately discourage victims from cultivating healthy social ties, further reducing their social support and increasing relationship anxiety.

"It felt like I was grasping at straws back then, just that kind of feeling. It wasn't as if I liked it or anything, now that I think about how long it's been. It was merely a desire to find someone to rely on, and then they came along, appearing just in time."

Self-Concept: Self-concept encompasses an individual's self-perception and evaluation. PUA victims typically exhibit low positivity, clarity, and self-acceptance in their self-concept[3, 4]. This was evident from their self-reporting, where they frequently questioned their worth and capabilities.

"If I'm frequently subjected to such cold treatment, it makes me upset.   Then I start wondering why he doesn't respond to my messages and if there's something wrong with him.   I've done? It leads me into self-reflection."

Emotional Dependence and Relational Fantasy: PUA victims often exhibit strong emotional dependence and anxious attachment styles, making them susceptible to manipulative behaviors[3]. Coupled with a tendency for relational fantasy, victims harbor unrealistic expectations of intimacy and ungrounded hope in their partners.

"Inside these years, I've been hung up on him, and I've had no thoughts of cheating on him. ...... Those remaining emotions for him, ... The total length of time was two and a half years."

"So he spent every day with me, chatting with me, all sorts of sweet talk, convincing me that he really understood me and that he really was the one to marry me. Then I agreed to this thing where he wanted to have sex with me, and I was really believing that I could marry him before I had sex with him for the first time in my life."

Conclusion: Research indicates that higher self-efficacy correlates with better-coping mechanisms, detrimental to PUA manipulation [3]. Conversely, those with lower self-efficacy and self-concept experience greater attachment anxiety and reduced relationship control, making them more susceptible to PUA tactics [4].

Aligned with Maslow's hierarchy of needs, PUA perpetrators exploit the victims' inherent need for be-longing and love. They manipulate the victims into believing in the possibility of a stable, long-term relationship, coercing them into making sacrifices.

In sum, PUA victims often exhibit a complex array of vulnerabilities, including reduced social support, emotional dependence, and compromised self-concept, making them prime targets for

manipulation. Their traits, coupled with societal influences and the calculated strategies of PUA perpetrators, compound their susceptibility to PUA tactics.

3.1.2 PUA Personality Trait Analysis of Prepatrators

The analysis clearly shows that PUA perpetrators frequently display hypocrisy, evasion of responsibility, self-centeredness, a strong desire for control, arrogance, emotional extremes, and mental distress in their relationships. Secondary coding uncovers high tendencies to conceal actions and avoid responsibility along with pronounced egocentrism and poor emotional self-control. Tertiary coding reveals a lack of resilience and feelings of personal inadequacy.

Building a Personal Image: Perpetrators initially create an alluring persona, capitalizing on socially valued traits like reliability, wealth, and power. This image serves as a foundation for exploiting the psychological halo effect, where victims continue to trust perpetrators despite observable flaws[5].

Overturning Personal Image: In the next phase, the perpetrator employs false "self-disclosure" to rapidly establish intimacy and trust. They use manipulative rhetoric to create a false sense of intimacy, often exploiting the victim's sympathies or feelings of importance.

Establishing a Contract: After securing the victim's interest, the perpetrator prompts the victim into emotional investment by subtly encouraging self-affirmations like "I really like him." They often set a contractual emotional premise that places them in a position of moral superiority, thereby reinforcing power imbalances[6].

"He said all along, I've been living in lies. I hope you can treat me sincerely and not deceive me in any way. You must promise me never to lie to me."

Breach of Contract: Once the perpetrator achieves their objective, they employ psychological strategies to shift the blame onto the victim, exploiting their self-esteem and causing emotional harm. This phase reveals the perpetrator's trait of responsibility avoidance.

Emotional Abuse: In the final stage, the victim, in a futile attempt to salvage the relationship, may resort to extreme actions, sometimes leading to severe psychological distress or the need for psychiatric intervention. The perpetrator continues to manipulate, furthering the victim's mental anguish.

Conclusion: Thus, the profile of a PUA perpetrator emerges: they exhibit underdeveloped psychological growth; possess flawed personalities; struggle with self-care; and are excessively focused on maintaining their image.

3.2 The dimension of relationship

3.2.1 Before entering a relationship

In the initial phase, PUA actors strategically choose targets and employ tactics across three key areas: social opportunities, engagement, and target involvement [4]. They emphasize physical attributes to exploit innate hu- man aesthetic preferences [7], reveal manipulated facial information in social contexts [8], enhance their perceived partner value by highlighting both objective and subjective traits[9], and adjust environmental conditions to elicit particular emotional reactions from targets. These strategies aim to establish advantageous manipulation circumstances by leveraging inherent and external factors affecting human relationships [10].

3.2.2 In the intimate relationship

In intimate relationships, PUA perpetrators employ tactics designed to establish power imbalances, diminish their partners' self-efficacy, and encourage sacrifices. Research suggests that a greater power imbalance heightens the risk of violence in relationships[11, 12]. More reciprocal aggression is

observed in intimate relationships with unequal power dynamics[13, 14]. They manipulate relational power dynamics by setting double standards, imposing rules, and enforcing emotional and psychological control. Their strategies for reducing efficacy range from devaluing their partners' self-worth to using psychological abuse that erodes confidence. Furthermore, PUAs exploit their partners' diminished self-efficacy to manipulate them into making approach-oriented and avoidance-oriented sacrifices[15]. A common solution for resolving conflicts of interest in intimate relationships often involves a sacrifice from one party[16]. PUA perpetrators emphasize unequal status between parties using intimidation or threats forcing concessions from the partner who then accepts the imbalance in efforts made[17]. By doing so, they consolidate their dominant position in the relationship, ensuring that their partners become more willing to make even greater sacrifices[18]. The cycle perpetuates as power becomes more entrenched[19], often leading to the objectification of the victim. Overall, PUA tactics aim to gain control and maintain it through a calculated undermining of the victim's self-worth and autonomy.

"Well, it's quite common with him. We often go out to eat after school in the afternoon. And then at the restaurant, he would give me a hard time, get furious, or criticize my mistakes. But he doesn't care at all if I feel upset!"

"I feel like he doesn't consider my feelings, but he might think that it's because of his consideration for me that he insists on certain things. How should I put it? That's how it is, perhaps for instance, I don't want something in a particular way, but he thinks that's exactly how I need it. There are even obstacles (preventing me from expressing my feelings)."

"Yes, it does feel like 'Double Standards', quite annoying."

3.2.3 After the relationship ends

After a relationship ends, PUA perpetrators often engage in behaviors that deviate from what is considered normal in intimate relationships, exhibiting life interference and "regretful" actions. These actions can range from public defamation and obstruction of the victim's social life to harassment and verbal abuse.   The aim is often to regain control over the victim or to derive some form of emotional or material satisfaction.   While alternating between pleas for reconciliation and abusive messages, they create a chaotic emotional environment. The hypocrisy inherent in these actions raises questions about the sincerity of the PUA's expressed torment. Ultimately, the PUA's focus seems to be not on the victim "as a person," but rather on the benefits they bring into the relationship, even post-breakup.

"After our relationship ended, he kept harassing me with text messages. His texts consisted of two parts. One part was filled with attempts to reconcile, while the other part contained abusive messages. These two types of situations alternated continuously. It felt like... it felt like I shouldn't label it as a mental illness without knowing what it is, but it seemed very much like schizophrenia. It's as if his primary personality would come out to speak, then his secondary one would take over - no wait, that's multiple personalities disorder - essentially it was like having two people at opposite extremes appearing simultaneously in the texts sent from one number."

3.3 Conclusion and Discussion

Based on the results of the research dimensions and existing case data, the storyline derived from the study is roughly as follows: PUA (Pick-Up Artist) actors select victims through social opportunities, shaping a positive image through interactive participation. In the early stages, they strive to create an impression of being able to provide value for others, achieving a level of involvement that includes behavior, thought, and emotional investment in this false persona crafted by them;

Once in a relationship, PUA actors immediately seize power within it. They set rules for relationships according to their own wishes and control what happens between themselves and their victims. This consolidates their dominant position. Through various direct or indirect behavioral or psychological means, they weaken and suppress victims' sense of efficacy while elevating their own status. They comprehensively suppress victims' self-conceptualization resistance intentions and reasons for resistance. By encouraging sacrifices either directly (through coercive measures) or indirectly (by playing the victimhood card exaggerating personal contributions mental manipulation etc.), PUAs use these tactics to further solidify their high-power status. As shown in Figure 1.
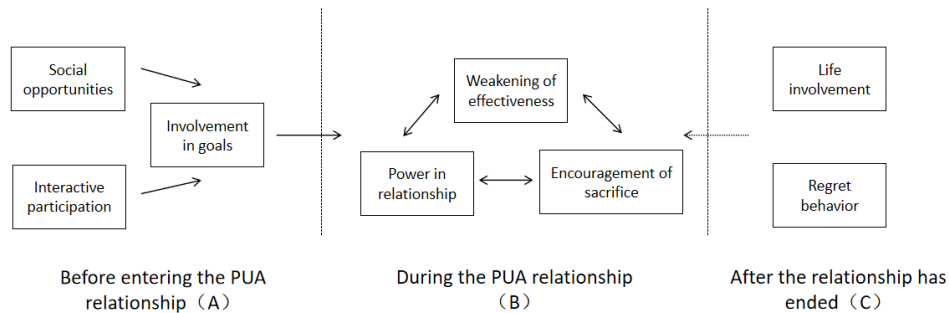

Figure 1: The Development of PUA Relationships

Victims generally find it difficult to escape such relationships even after ending them; PUAs are likely to interfere with victims' lives directly or indirectly: punishing them inducing guilt forcing them back into exploitative situations where they continue suffering degradation along with physical emotional material exploitation.
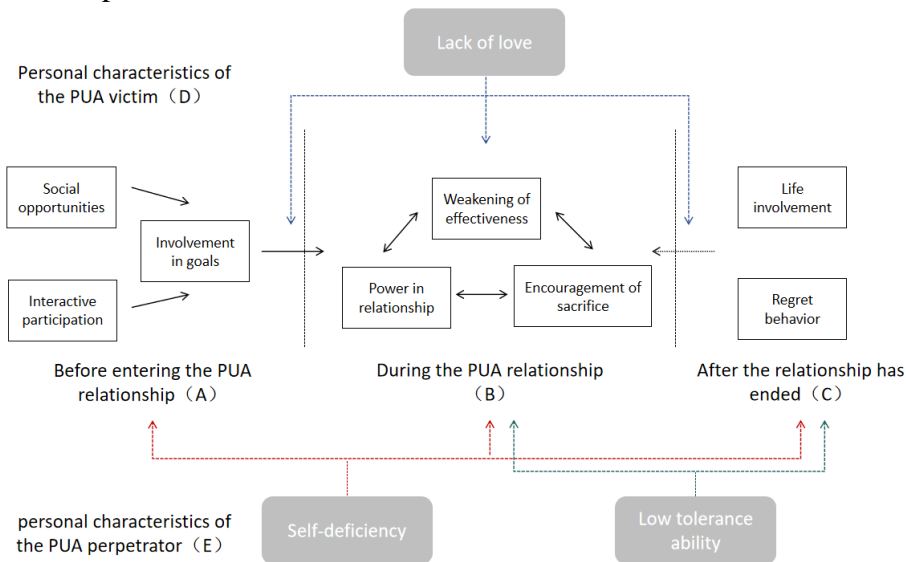

Figure 2: The Impact of PUA Victim/Actor's Personal Traits on the Development of PUA Relationship

Personal traits of both victims and PUAs are crucial for understanding the dynamics of these relationships. Victims often find it hard to leave due to emotional factors like compassion, guilt, or dependence. The study suggests that the key to breaking free might be "clarifying their feelings" and prioritizing self-care. For PUAs, the trait "low tolerance" usually does not reveal itself before entering into a relationship i.e., before establishing a connection with someone else's deceitful behavior and evasion is rarely exposed or noticed; however "self-deficiency" runs through all stages (beginning-

middle-end)of perpetrator's actions hence could be considered as an important indicator while screening potential partners prior entering into any relation. As shown in Figure 2.

While the physical harm in PUA relationships might appear less severe than in cases of domestic violence, the emotional and psychological toll can be equally, if not more, damaging. Even after a physical separation, the emotional scars can linger, emphasizing the need for psychological counseling for victims.

Despite the small sample size in this study, it provides nearly saturated content for qualitative research, calling for more extensive research in the future. In summary, PUA relationships are characterized by the manipulator's unilateral control, suppression, and exploitation of the victim.

Contrary to the common misconception that belittlement is central to Pick-Up Artist (PUA) relationships, it's often sacrificial and enabling behavior that signifies these unhealthy bonds. This insight helps us understand PUA dynamics better and provides ways for victims to recognize and exit such relationships.

References

[1] I. G. Sarason, H. M. Levine, R. B. Basham, Assessing social support: The social support questionnaire, Journal of Personality and Social Psychology 44 (1) (1983) 127–139.

[2] L. Jingjing, A study on the relationship between college students' love pressure, adult attachment, and social support, Ph. D. thesis, Jiangxi Normal University of Science and Technology (2017).

[3] S. L. Wright, K. M. Perrone, An examination of the role of attachment and efficacy in life satisfaction, Counseling Psychologist 38 (6) (2010) 796–823.

[4] P. Xuming, P. Hongyu, Z. Siqi, Traps in intimate relationships: A qualitative study on "emotional seduction" behavior, Chinese Social Science Digest 0 (2) (2021) 145–146.

[5] L. Fenghua, Y. Jianwei, H. Junhua, The relationship between college students' intimate relationship experiences and selfconcept, Chinese School Health 31 (2) (2010) 214–216.

[6] Z. Han, Exploration of the reasons why women rationalize intimate relationship violence — from the perspective of gender inequality, Law and Society (18) (2020) 213–214.

[7] G. Rhodes, L. W. Simmons, M. Peters, Attractiveness and sexual behavior: Does attractiveness enhance mating success? Evolution and Human Behavior 26 (2) (2005) 186–201.

[8] S. Han, S. Liu, Y. Gan, Repeated exposure makes attractive faces more attractive: Neural responses in facial attractiveness judgement, Neuropsychologia 139 (2020) 107365.

[9] J. E. Edlund, B. J. Sagarin, Mate value and mate preferences: An investigation into decisions made with and without constraints, Personality Individual Differences 49 (8) (2010) 835–839.

[10] C. L. Lee, E. Middleton, D. Mirman, Incidental and context-responsive activation of structure- and function-based actionfeatures during object identification, Journal of Experimental Psychology: Human Perception and Performance 39 (1) (2013) 257–270.

[11] Farrell A K, Simpson J A, Rothman A J. The relationship power inventory: Development and validation [J]. Personal Relationships, 2015, 22(3): 387-413.

[12] Bowen M. Theory in the practice of psychotherapy [J]. Family therapy: Theory and practice, 1976, 4(1): 2-90.

[13] C. Viejo, C. P. Monks, V. S ánchez, Physical dating violence in spain and the united kingdom and the importance of relationship quality, Journal of Interpersonal Violence 31 (8) (2016) 1453–1475.

[14] J. Pulerwitz, S. L. Gortmaker, W. Dejong, Measuring sexual relationship power in hiv/std research, Sex Roles 42 (7) (2000) 637–660.

[15] Z. Xiaoying, A preliminary exploration of mental violence among college students, Journal of Ningbo University (EducationalScience Edition) (4) (2004) 86–89.

[16] Van Lange P A M, Rusbult C E, Drigotas S M, et al. Willingness to sacrifice in close relationships[J]. Journal of personality and social psychology, 1997, 72(6): 1373.

[17] C. Hong, Z. Huan, H. Xiaoyong, The impact of sacrifice on relationship satisfaction and its mechanism, Journal of Southwest University (Social Science Edition) 45 (3) (2019) 99–105+190.

[18] F. Righetti, L. B. Luchies, S. Van Gils, The prosocial versus proself power holder: How power influences sacrifice in romantic relationships, Personality social psychology bulletin 41 (6) (2015) 779–790.

[19] W. Hao, Y. Guoliang, Perception of power in intimate relationships, Advances in Psychological Science 25 (4) (2017) 639–651.