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經歷背叛之創傷後壓力症狀的風險因子與心理病理模式

Could Betrayal be a Potential Trauma?

Examining Risk Factors and Psychopathological Model of

Betrayal-Related Posttraumatic Stress Symptoms

劉亭妤

Ting-Yu Liu

指導教授：陳淑惠 博士

Advisor: Sue-Huei Chen, Ph.D.

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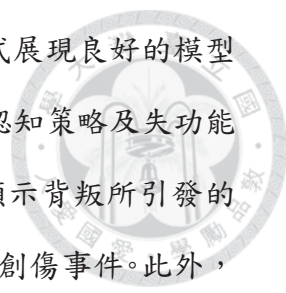
這篇論文的完成、研究所旅途的完整，是許多人的力量共同交織而成，紙短情長，很多沒有列出名字但在這條路上曾經幫助過我的人，請接受我深深的感謝。



## 摘要



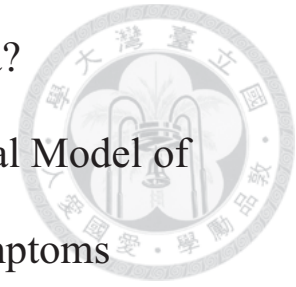
**目的** 經歷背叛事件可能造成某些個體相當嚴重的心理創傷，甚至產生創傷後壓力疾患（posttraumatic stress disorder, PTSD）相關症狀。臨床中亦常見個案受到背叛經驗之影響，甚至因為被背叛而產生強烈的心理困擾。然而，回顧過去文獻，針對背叛經驗對個體之影響來進行探討的實徵研究為數不多，而在少數探討被背叛者之心理狀態的研究中，亦缺乏評估個體主觀背叛程度的相關量表。本研究將探討經歷背叛後是否會出現類似 PTSD 之症狀，檢驗相關的風險因子，並據此提出背叛引發之 PTSD 症狀的心理病理模式。**方法** 參與者來源為普通心理學修課學生和網路招募，為了建立可評量主觀背叛感受之量表，本研究先進行前置研究，共蒐集 63 位參與者的背叛經驗及感受。研究一採橫斷式研究，包含 267 位參與者，在知情同意後，所有參與者均先書寫其所經歷過的背叛事件，再完成數份自陳量表，包括：背叛距今的時間、關係類別、關係親密/親近/信任程度、關係改變、背叛時負向情緒、憤怒/報復反應、背叛評估、覺知背叛嚴重度、失功能認知（負向自我與負向世界）、不良的認知策略（反芻與思考壓抑），以及背叛引發的 PTSD 症狀（回想事發後一個月與最近一個月的 PTSD 症狀）。研究二為前瞻式研究，107 位參與者完成與研究一相同之測量後，間隔六週後，追蹤測量背叛引發的 PTSD 症狀。**結果** 前置研究、研究一及研究二結果顯示：(1) 信任/背叛評估量表具良好的內部一致性及可接受的再測信度；(2) 針對目標背叛事件，本研究中共有 17.2% 的受試者目前極可能符合創傷後壓力疾患之診斷；(3) 相關分析結果發現，背叛後雙方的關係變差、背叛時負向情緒、憤怒/報復反應、覺知背叛嚴重度、背叛評估、背叛後的失功能認知及不良的認知策略，與事發後一個月及目前的 PTSD 症狀嚴重度均有顯著正相關。此外，中介分析顯示，背叛評估透過失功能認知與不良的認知策略，影響目前的 PTSD 症狀；(4) 根據路徑



分析結果，本研究所提出之背叛引發的 PTSD 症狀心理病理模式展現良好的模型適配度，顯示對背叛事件的主觀評估背叛程度，可透過不良的認知策略及失功能認知，進而影響背叛引發的 PTSD 症狀。**討論** 本研究結果顯示背叛所引發的 PTSD 症狀及強烈情緒困擾，可能不亞於現今診斷系統所定義之創傷事件。此外，本研究所提出的背叛後 PTSD 症狀心理病理模式，可作為臨床工作者處遇遭遇背叛的個案之參考。

**關鍵詞：**背叛、創傷後壓力疾患、失功能認知、反芻、思考壓抑、人際關係

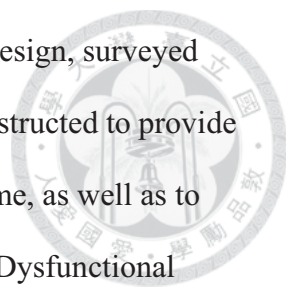
Could Betrayal be a Potential Trauma?  
Examining Risk Factors and Psychopathological Model of  
Betrayal-Related Posttraumatic Stress Symptoms



Ting Yu, Liu

### Abstract

**Background:** Betrayal by a trusted individual is highly distressing and may cause symptoms similar to posttraumatic stress disorder (PTSD). Given that the issue has theoretical and clinical importance but lacks sufficient data, it is crucial to investigate the risk factors and psychopathological model of betrayal-related PTSD. Among the possible risk factors, catastrophic betrayals, like potentially traumatic events, tends to shatter one's fundamental assumptions of safety, control, trust, and justice in the self and the world. This may further lead to negative beliefs pertaining to the self and the world, resulting in prominent PTSD symptomatology. Certain maladaptive coping strategies may prevent the negative beliefs from being corrected, so as to maintain PTSD symptomatology. Accordingly, we proposed a psychopathological model of betrayal-related PTSD, in which the interplay of appraisal of betrayal, dysfunctional cognitions, and maladaptive cognitive strategies contribute to the development of betrayal-related PTSD. The aim of the study is threefold: (1) to develop a subjective betrayal appraisal scale; (2) to investigate risk factors for betrayal-related PTSD and examine whether betrayal could result in PTSD symptomatology; and (3) to examine the proposed psychopathological model of betrayal-related PTSD by using a prospective design. **Method:** The pilot study surveyed 63 college students' knowledge



and conceptualization of betrayal. Study 1, using a cross-sectional design, surveyed 267 young adults who reported to have been betrayed. They were instructed to provide a narrative of the most distressing betrayal experience in their lifetime, as well as to elaborate the nature and appraisals of the relationship and betrayal. Dysfunctional cognitions, maladaptive cognitive strategies, and PTSD symptoms pertinent to the betrayal were assessed. The Study 2, using a prospective design, surveyed 107 young adults who completed baseline and 6-week follow-up assessment. **Results:** (1) The self-developed Trust-Betrayal Inventory demonstrates a good internal consistency and an acceptable test-retest reliability. (2) Approximately one-fifth (17.2%) of the sample met the criteria for current probable PTSD. (3) Relationship change, peri-betrayal negative emotions, current anger/revenge responses, perceived betrayal severity, betrayal appraisal, and post-betrayal cognitive factors were significantly associated with both acute (first months since betrayal) and current PTSD symptoms. Moreover, post-betrayal cognitive factors significantly mediated the relationship between betrayal appraisal and PTSD. (4) Path analysis indicated a good fit for the proposed psychopathological model. **Conclusion:** Our study provides preliminary evidence that betrayal might be viewed as a potential traumatic event that may cause PTSD. Subjectively-rated betrayal and post-betrayal cognitive factors were shown to be the crucial risk factors of betrayal-related PTSD. Moreover, the proposed psychopathological model for post-betrayal PTSD was supported. The clinical implications of the findings and future directions are discussed.

***Keywords: betrayal, PTSD, dysfunctional cognition, rumination, thought suppression, interpersonal relationship***



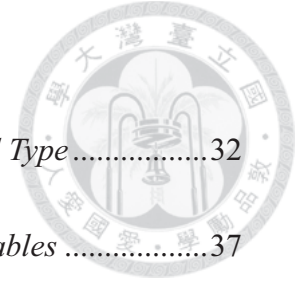
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## Chapter 1 Introduction



### Betrayal

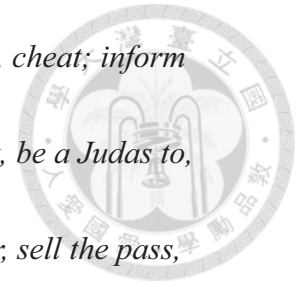
Betrayal is a common occurrence in the general population; most people will be betrayed or betray others at some point in their lifetime (Jones & Burdette, 1994).

Betrayal is likely to break a bond of trust, create a sense of lost control and predictability, and shatter one's fundamental assumptions of relationship, self, and world. Accordingly, betrayal can serve as a severe stressor and cause PTSD-like symptoms, such as intrusive images, nightmares about the memories, avoiding related reminders, etc. (Rachman, 2010). The phenomenon of betrayal and its impact has theoretical and clinical importance; however, this topic has not been fully studied in the field of psychology. Until recent years, researchers seem to have become increasingly interested in the issue of betrayal.

One possible reason for the lack of empirical research on betrayal comes from the difficulty in conceptualization, as there are multiple definitions for betrayal. The original definition of "betray" from the Oxford Dictionary is to "*expose (one's country, a group, or a person) to danger by treacherously giving information to an enemy; treacherously reveal (information); be gravely disloyal to; unintentionally reveal*", and its synonyms are "*break one's promise to, be disloyal to, be unfaithful to, break*



*faith with, play someone false, fail, let down; double-cross, deceive, cheat; inform on/against, give away, denounce, sell out, stab someone in the back, be a Judas to, give someone a Judas kiss, bite the hand that feeds one; turn traitor, sell the pass, etc.”*



In the field of psychology, betrayal has been conceptualized into psychodynamic, interpersonal, and trauma approaches. From the psychodynamic view, betrayal refers to “*the dynamic by which children discover that someone on whom they were vitally dependent has caused them harm*” (Finkelhor & Browne, 1985). From the interpersonal approach, betrayal is regarded as an interpersonal transgressions, and has been conceptualized as “*any violation of trust and allegiance as well as other forms of intrigue, treachery, and harm-doing in the context of established and ongoing relationships*” (Jones, Couch, & Scott, 1997); “*an intentional violation of trust and commitment, as when one’s partner commits an interpersonal transgression that is inconsistent with one’s expectations or beliefs about the partner*” (Couch, Jones, & Moore, 1999, p.452); or “*a voluntary violation of mutually known pivotal expectations of the trustor by the trusted party (trustee), which has the potential to threaten the well-being of the trustor*” (Elangovan & Shapiro, 1998, p.548). From the betrayal trauma approach, betrayal is defined as “*any trauma that violates the trust placed in persons upon whom one is socially dependent*” (Freyd, 1996), or “*the sense*

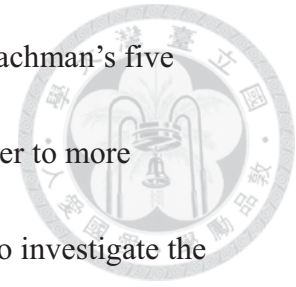
*of being harmed by the intentional actions or omissions of trusted person”* (Rachman, 2010).



Across these definitions, betrayal seems to consistently involve three components: 1) a trusting relationship; 2) the expectations of the relationship; and 3) a harmful action committed by the partner which violates these beliefs. Therefore, in this study we conceptualized betrayal as “the individual’s subjective perception of being harmed by the betrayer’s behavior, which violates the trust and expectation of the relationship”.

**Types of Betrayal.** Infidelity is probably the most common betrayal event. In a recent community survey, 22% of men and 12% of women reported to having at least one extramarital sexual experience in their lives (Blow & Hartnett, 2005). Despite the high prevalence of infidelity, betrayal is not unique to romantic relationships and, in fact, it covers a wide range of behaviors, such as a partner’s disloyalty, parents’ abandonment, or being stood up by a friend. Rachman (2010) proposed five common types of betrayal, including harmful disclosures of confidential information, disloyalty, infidelity, dishonesty, and failures to offer expected assistance during significant times of need. From this perspective, a betrayal event may involve more than one category of betrayal. For instance, a romantic partner’s extramarital affair might involve a mix

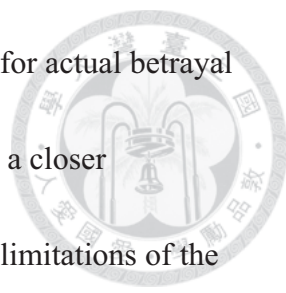
of disloyalty, infidelity, and dishonesty elements. In other words, Rachman's five types of betrayal are more like separate elements of betrayal. In order to more accurately categorize betrayal events, a pilot study was conducted to investigate the possible types of betrayal.



**Who Betrays? : The Relationship between Victim and Betrayer.** As

mentioned previously, betrayal usually happens in an ongoing relationship. Thus, when elaborating the concept of betrayal, it is important to consider the nature of the relationship. Betrayal can occur in many types of relationships, such as work or business relationships, romantic relationships, friendships, and parent-child relationships (Chan, 2009). In fact, we are vulnerable whenever we decide to enter any relationship, as Jones and Burdette (1994) mentioned: “*any time we enter into any sort of relationship with others we run the risk of being betrayed at any point during the development of this relationship*”. What kind of relationship produces the deepest feelings of betrayal? In most circumstances, people hold stronger and more meaningful assumptions in a closer relationship rather than a distant one (Dixon, 2009). Accordingly, it is supposed that the closer the relationship, the deeper the feeling of betrayal.

Nevertheless, the empirical findings proved the opposite: when faced with



betrayal narratives (hypothetical situations presented as a substitute for actual betrayal experience), subjects perceived less severe betrayal if committed by a closer individual (Dixon, 2009). Dixon mentioned that one of the possible limitations of the previous study is the use of imagined betrayal narratives. The imagined betrayal scenarios are probably not as severe as the betrayal events that actually happened in one's life. It is also unclear whether participants could imagine being betrayed in this way. However, the inconsistency between theoretical hypothesis and empirical data makes this question worth testing. Moreover, in addition to the relationship types, participants' personal evaluations of the intimacy, closeness, and trust of the relationships between themselves and the betrayers may also be of interest.

### **Why Is Betrayal So Harmful?**

*Violating trust and expectation.* Fitness (2001) suggested that the key to understanding betrayal lies in our knowledge of the concept of interpersonal relationships. That is, the theories, beliefs, and expectations about what a relationship should be and how it works both generally and specifically. These rules develop from caregivers and the surrounding culture of our childhood, and we hold these basic assumptions of relationships when entering into a new one. For instance, expectations of passion and intimacy (Fletcher, Rosanowski, & Fitness, 1994) include

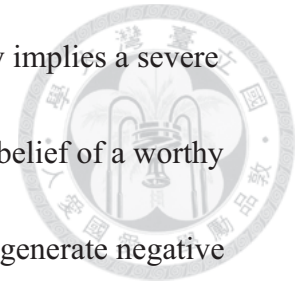
being cared for and supported along with preconceptions of how our partner should treat us. We also trust that our partners will try to fulfill, or at least respect, these beliefs (Elangovan & Shapiro, 1998). If they act within our expectations, trust can be built and the relationship runs smoothly, even if there are bumps along the way.

Betrayal is an unexpected event that interrupts this comfortable interaction; it comes as a surprising shock for individuals (Rachman, 2010). Betrayal forces us to face the fact that our partner does not fulfill our expectations, or that our expectations are not a priority. Moreover, it puts us at risk of ending the relationship; we have to decide whether or not the relationship is worth the risk, given that betrayal can cause such pain (Dixon, 2009).

***Violating basic assumptions of self and the world.*** Betrayal can not only violate the trust and expectations of a relationship, but may also challenge one's basic beliefs of the world and the self. According to Janoff-Bulman (1992), individuals hold three basic assumptions of the world and the self, i.e., the world is benevolent, the world is meaningful, and the self is worthy. In other words, people believe that they are generally good and live in a benevolent and meaningful world. When an individual experiences a stressful event that shatters these basic assumptions, it may cause emotional distress. In most cases, betrayals are unexpected and come as a shock (Rachman, 2010), challenge our beliefs of the benevolent and meaningful world,




rendering it dangerous and meaningless. Moreover, betrayal usually implies a severe interpersonal rejection (Fitness, 2001), thus it may challenge one's belief of a worthy self as well. If these basic beliefs are severely challenged, one may generate negative assumptions of the world and the self, resulting in emotional distress.



## **Betrayal and Trauma**

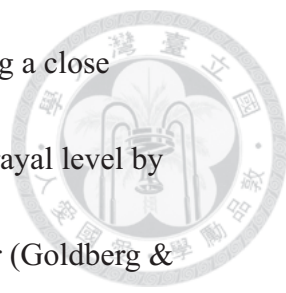
According to DSM-5 (American Psychiatric Association, 2013), a traumatic stressor is defined as “*exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence*”. Although the event that involves betrayal cannot be regarded as a “trauma event” based on DSM-5, it has many aspects that potentially in common with traumatic event. First, clinical observation indicates that betrayal may lead to PTSD-like symptoms, such as sleep disturbance, emotional numbing, avoidance of trauma reminders, intrusive images and thoughts, difficult concentrating, hypervigilance, rumination, foreshortened future, or anger (Finholt, 2011; Rachman, 2010; Whisman & Wagers, 2005). Second, betrayal often occurs “unpredictably and uncontrollably”, and “may violate the basic assumptions and expectations of trust and justice.” Thus, its nature could be categorized as a potentially traumatic event (Litz, Miller, Ruef, & McTeague, 2002). Indeed, betrayal can be seen as an “interpersonal aspect of trauma” (Kelley, Weathers,



Mason, & Pruneau, 2012), which may be especially severe and long-lasting (American Psychiatric Association, 2000). Third, according to betrayal trauma theory, betrayal plays an important role in the development of pathological responses to trauma (Freyd, DePrince, & Gleaves, 2007). Studies have demonstrated that betrayal appraisal predicts PTSD symptoms (DePrince, Chu, & Pineda, 2011; Kelley et al., 2012). Lastly, betrayal may generate negative beliefs pertaining to the self and the world (will discuss later). That is, betrayal may lead to one's emotional distress through similar cognitive processing as a potentially traumatic event. According to the above, betrayal could be conceptualized as a psychological trauma which may cause emotional distress.

### **Subjective Betrayal Appraisal**

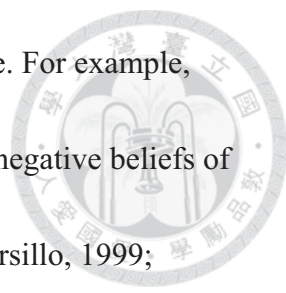
The level of betrayal plays a crucial role in the development of PTSD symptoms (Kelley et al., 2012). However, lack of a reliable measure of betrayal is one of the main limitations in studying betrayal. The “*betrayal trauma theory*” (Freyd, 1996), proposed by the most productive research group of betrayal in the past decades, defined betrayal as “*any trauma that violates the trust placed in persons upon whom one is socially dependent*”. This definition implies that betrayal has been conceptualized as a relatively objective aspect, and is proposed to be inherent in



certain traumatic events, particularly interpersonal traumas involving a close relationship. Under this assumption, several studies have sorted betrayal level by relational closeness between the trauma survivor and the perpetrator (Goldberg & Freyd, 2006). For instance, sexual abuse from a close other is a “high-betrayal trauma” (HBT), where physical or sexual assault from a non-close other is a “moderate-betrayal trauma” (MBT). Nevertheless, whether betrayal can be objectively assessed is questionable. Kelley et al. (2012) suggests that “individuals can and do experience a felt sense of betrayal even when there is little or no objective evidence of significant violation”. As such, betrayal might be better assessed by using a subjective appraisal scale. Kelley et al. (2012) conducted their research using a single-item subjective scale. In order to obtain more reliable and valid subjective appraisal of betrayal, a multi-item measurement needs to be built for further studies.

### **Post-Betrayal Dysfunctional Cognitions**

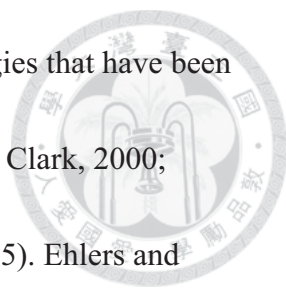
Similar to physically traumatic events, betrayal can lead to severe violation of fundamental beliefs and expectations of safety, trust, and justice in relationships and the world. It may therefore generate negative beliefs pertaining to the self and the world (e.g., “*I can’t stop bad things from happening to me*” or “*people cannot be trusted*”), which results in PTSD symptoms. Several studies have investigated the role



of dysfunctional cognitions in PTSD and supported their importance. For example, compared to non-PTSD survivors, victims who display PTSD hold negative beliefs of self and the world (Beck et al., 2004; Foa, Ehlers, Clark, Tolin, & Orsillo, 1999; Startup, Makgekgenene, & Webster, 2007). In addition, dysfunctional cognitions were found to predict PTSD severity after physical or sexual assault (Dunmore, Clark, & Ehlers, 2001). Dysfunctional cognitions about self refers to a generally negative view of self, permanent change, alienation, hopelessness, self-trust, and the negative interpretation of symptoms, whereas dysfunctional cognitions about the world refers to the belief of an unsafe world and the mistrust of other people (Foa et al., 1999). Based on the above, this study hypothesized that betrayal appraisal exerts an influence on PTSD symptoms through dysfunctional cognitions.

### **Maladaptive Cognitive Strategies**

Betrayal usually generates strong emotional reactions (Fitness, 2001; Leary, Springer, Negel, Ansell, & Evans, 1998; Vangelisti & Sprague, 1998) and some victims reported to have intrusive images of the betrayal experiences (Rachman, 2010). Thus, an individual may generate some maladaptive cognitive strategies to process these intrusive reactions. For example, repetitive thinking about the betrayal experiences or trying to suppress the thought (Rachman, 2010). Rumination and



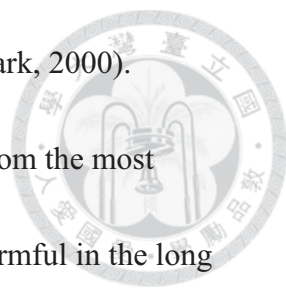
thought suppression are both common maladaptive cognitive strategies that have been discussed to maintain PTSD symptoms (Amir et al., 1997; Ehlers & Clark, 2000; Ehlers, Mayou, & Bryant, 1998; Morgan, Matthews, & Winton, 1995). Ehlers and Clark (2000) stated that the cognitive strategies victims choose are linked meaningfully with their appraisal of the trauma and how they cope with traumatic events in general. That is, once individuals select a maladaptive cognitive strategy to deal with traumatic events, their negative appraisals of trauma become harder to be modified. Thus, these maladaptive cognitive strategies may not only interrupt the change in negative appraisals of trauma, but also influence PTSD symptoms directly.

**Rumination.** The crucial role that rumination plays in psychological distress has been thoroughly discussed over the past decades (Ehlers & Clark, 2000; Gross, 1998; Mathews & MacLeod, 2005; Mor & Winquist, 2002; Nolen-Hoeksema, 1991; Papageorgiou & Wells, 2003). Ruminative thought not only involves persistent and passive self-focused attentional bias (Gross, 1998), but also involves cognitive content (Yu, 2011). Therefore, rumination is commonly conceptualized as “*repetitive thinking about past experiences and/or the causes, consequences and symptoms of one’s negative affect*” (Nolen-Hoeksema, 1991).

Rumination is thought to be central to the development of PTSD. Rumination about the trauma and its consequences typically refers to how the event could be

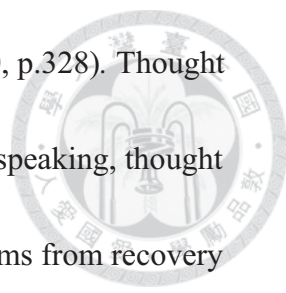


prevented or how justice and revenge can be achieved (Ehlers & Clark, 2000).



Although ruminative responses may offer a temporary distraction from the most emotional moments of a negative experience, they are ultimately harmful in the long run (Michael, Halligan, Clark, & Ehlers, 2007). From a theoretical perspective, Michael et al. (2007) postulated that rumination may maintain PTSD symptoms by following mechanisms. First, rumination acts as a form of cognitive avoidance by allowing the individual with PTSD a means to process the trauma in a more abstract, less concrete way (Ehlers & Steil, 1995). The negative feelings experienced while ruminating may trigger more intrusive memories in turn, which require more rumination, resulting in a cyclical process (Michael et al., 2007). Second, rumination inhibits emotional processing following trauma. A successful emotional processing of trauma experience is proved to be an important path to get rid of PTSD symptoms, and it occurs when the initial emotions are activated and open to change (Foa & Kozak, 1986). Therefore, ruminative thought may interrupt this emotional processing and cause PTSD. Third, the feelings associated with rumination could also play a direct role in PTSD. For example, ruminative thinking has been found to exacerbate depressed and dysphoric mood states, both concurrently and prospectively (Nolen-Hoeksema, 1991).

**Thought suppression.** Thought suppression is defined as “*trying to push*



*thoughts about the trauma out of one's mind*" (Ehlers & Clark, 2000, p.328). Thought suppression contributes to the maintenance of PTSD. Theoretically speaking, thought suppression may be linked to PTSD by preventing intrusive symptoms from recovery (Shipherd & Beck, 2005). Information processing theory posits that, not only do trauma-related information stay in our active memory, but that they attempt to associate themselves with existing mental representations (Horowitz, 1976). Subsequently, the intrusive thoughts occur until traumatic experience is fully assimilated into individual's conceptual memory. According to information processing theory, allowing the intrusive thoughts occurring without suppression offers a way to recovery. As a result, thought suppression may interrupt the memory assimilation and lead to PTSD. Previous studies support that thought suppression is positively correlated to PTSD symptoms (Amir et al., 1997; Ehlers et al., 1998; Morgan et al., 1995), while experimental investigations also find that deliberate thought suppression facilitates the maintenance of PTSD symptoms (Shipherd & Beck, 1999, 2005).

### **Betrayal-Related Emotional Responses**

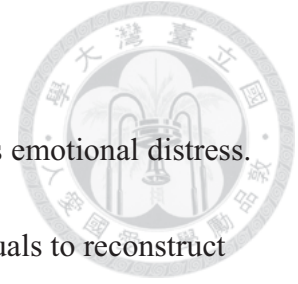
Betrayal usually induces a range of negative emotional reactions, accordingly, considering these reactions is crucial to understanding the processes that take place after betrayal (Fitness, 2001; Leiser, 2011). Peri-betrayal emotional reactions include

hatred, anger, sadness, fear, hopelessness, powerlessness, humiliation, ashamed, and jealousy (Fitness, 2001). Aggressive emotions, such as hatred and anger, are typical emotions in response to the offenders (Fitness & Fletcher, 1993). Passive emotions include sadness, fear, hopelessness, and powerlessness, are also common in betrayal.

People who used to blame themselves may experience these emotions when being betrayed. Other reactions, for example, humiliation, ashamed, and jealousy, are proposed to be hurtful (Fitness, 2001). These emotional reactions imply a sense of losing self-esteem by partner's betrayal. Accordingly, it would be worthy to investigate the relationship between these negative emotions and PTSD symptoms.

Other powerful emotional reaction that usually follows betrayal is the sense of revenge (Fitness, 2001). The desire to exact vengeance when feeling hurt or wronged has been a fundamental nature of humankind (Frijda, 1994). This feeling of revenge is instilled within the victim by a primal urge to get even with the betrayer (Fitness, 2001), and "*the passion of that moment makes revenge feel like the right thing to do*" (Tripp & Bies, 2010). However, despite the basic urge to get even when harmed, revenge is generally regarded as an unhealthy and irrational way to cope with conflict (Jacoby, 1983). Therefore, the feeling of revenge may have a positive association with the victim's perception of betrayal, as well as the emotional distress.

## **Post-Betrayal Relationship**

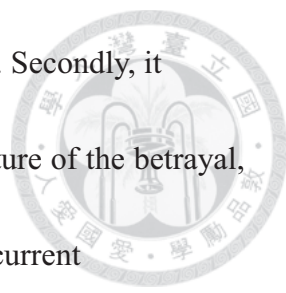


A change in the relationship post-betrayal may influence one's emotional distress. Betrayal will change the nature of any relationship, forcing individuals to reconstruct the foundation and expectations of the relationship. This change in dynamics is not always negative and, in fact, may bring about progress. For example, betrayal may incite those involved to open a dialogue regarding fantastical expectations of the relationship by either side, thereby helping to rebuild with more realistic ones. Thus, it is supposed that post-betrayal relationship changes can bring about drastically different outcomes. For this study we will investigate two main questions: 1) has the relationship maintained the same state as before, and 2) has the relationship improved or deteriorated.

## **The Present Study**

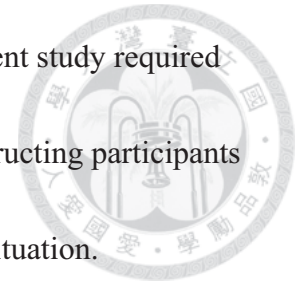
Based on clinical observations and literatures reviewed, the present study conceptualized betrayal as a potential traumatizing event and aimed to investigate the existence of the betrayal-related PTSD. Several aims were explored in the present study.

Previous research of betrayal relied on objective measures of betrayal, which has been criticized for their validity. In order to assess an individual's subjective level of



betrayal, we first developed a reliable measure of betrayal appraisal. Secondly, it remains unclear whether or not the demographic characteristics, nature of the betrayal, nature of the relationship, and cognitive factors are correlated with current betrayal-related PTSD symptoms. Therefore, the correlations and predicted effects of these potential risk factors and PTSD symptoms were tested in the study. According to previous knowledge of betrayal, catastrophic betrayal can not only cause severe violation of trust, but may also challenge the basic assumptions of the self and the world. Therefore, we hypothesized that betrayal will shatter an individual's basic assumption of a worthy self living in a benevolent and meaningful world, and in turn generates negative cognitions pertaining to the self and the world, consequently maintaining PTSD symptoms. On the other hand, the intrusive symptoms following betrayal may induce an individual to use some maladaptive cognitive strategies to cope with it. These strategies, such as rumination and thought suppression, may inhibit the negative cognitions to be modified. Accordingly, the dysfunctional cognitions and maladaptive cognitive strategies may act as not only the predictors of PTSD, but also the mediators that influence the path from betrayal appraisal to PTSD symptoms. Finally, as far as we know, the psychopathological model of betrayal-related PTSD has not been tested previously. Therefore, the third goal of the study is to estimate the model fit of the proposed psychopathological model of

betrayal-related PTSD by a prospective design. Moreover, the present study required participants to recall their own betrayal experiences, instead of instructing participants to read a betrayal script and imagine themselves experiencing the situation.



In sum, the aims of the present study were threefold: 1) to construct a measure of subjective appraisal of betrayal; 2) to investigate the relationship between betrayal and PTSD; and 3) to examine the fitness of the psychopathological model of betrayal-related PTSD to the data by using path analysis.

## Chapter 2 Pilot Study



The purpose of the pilot study was to investigate the nature of betrayal and construct a measure of appraisals of relationship trust and betrayal, namely, the Trust-Betrayal Inventory. We firstly surveyed participants' knowledge and conceptualization of betrayal with two questions: 1) "*what do you think of betrayal?*" and 2) "*why do you feel of being betrayed?*" Then, we asked them to describe their most disturbing betrayal experience and the responses following betrayals.

### Method

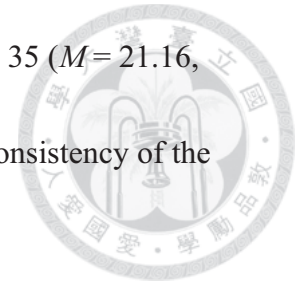
**Participants.** Three samples were used to develop the Trust-Betrayal Inventory. All the participants were recruited from introductory psychology courses in National Taiwan University and the Internet. Participants received course credit or NTD115/hour for their participation.

**Item pool sample.** The sample comprised 63 college students, ages ranged from 18 to 25 ( $M = 20.18$ ,  $SD = 1.71$ ), and half the sample were males (53.2%). The sample was used to collect the item pool of people's knowledge of betrayal.

**Betrayal sample.** The sample recruited 334 young adults (44% male; 56%



female) who had a betrayal experience, the ages ranging from 18 to 35 ( $M = 21.16$ ,  $SD = 3.22$ ). These participants were used to examine the internal consistency of the Trust-Betrayal Inventory.



**Test-retest sample.** The participants included 107 young adults (36% male; 64% female) with a betrayal experience, the ages ranged from 18 to 35 ( $M = 21.86$ ,  $SD = 3.81$ ). The sample was used to examine the test-retest reliability of the Trust-Betrayal Inventory.

## Procedure

The Institutional Review Board of the Department of Psychology, National Taiwan University, approved the study before any data collection was conducted. After signing an online informed consent, participants were instructed to provide at least five betrayal events in their lifetime. The author modified the instruction of prior research (Finkel, Rusbult, Kumashiro, & Hannon, 2002) as follows: “*All of us have expectations about how our partners (e.g., friends, romantic partner, family members, or colleagues) should treat us. No matter how well-behaved a partner may be in general, from time to time he or she is likely to violate those expectations; that is, your partner is likely to “break the rules” of your relationship. For example, deception, breaking promise, revealing my secret, taking my ideas for his/her own,*

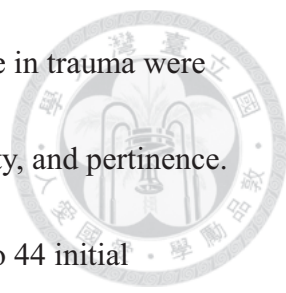
*abandonment, sexual assault, etc. Please list at least five aforementioned experiences that you ever had.*



Participants were then asked to choose the most distressing betrayal experience and to give a paragraph descriptions of: 1) the details of the event, 2) the immediate responses to the betrayal (i.e., “*what were your immediate thoughts and feelings about the event?*”), 3) the delayed responses to the betrayal (i.e., “*what were your thoughts and feelings after the event?*”), and 4) the strategies used to cope with the betrayal and its consequences (i.e., “*what did you do to make yourself better following the betrayal?*”). To encourage participants to write as much as possible, they were asked to write for at least ten minutes per question. Participants also completed the questionnaires that assess betrayal-related psychological reactions and PTSD-like symptoms.

## **Results**

**Types of Betrayal.** A total of 372 betrayal events were collected in the study. In classifying betrayal events, the author first categorized all the events into small concepts (e.g., “parents forgot to give me a ride home after school” or “my best friend and I agreed to go to the same college, but she went to another college instead”), then grouped these small concepts into general concepts (e.g., “abandonment”). Second,

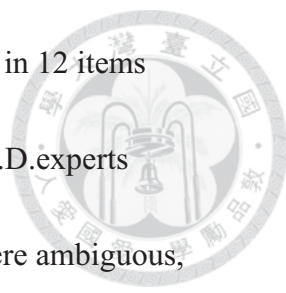


several Ph.D. and master's level clinical psychologists with expertise in trauma were invited to review all the statements for redundancy, clarity, ambiguity, and pertinence. Through group discussion, 372 statements were further grouped into 44 initial categories. Two Ph.D. experts then provided feedback for these initial categories, including whether or not they were ambiguous or redundant, and how some categories could be combined into one category. Following this, the 44 categories were edited and reduced to fifteen categories, i.e., deception, breaking promises, abandonment, revealing one's secrets without permission, unpredictable interpersonal isolation, unpredictable verbal violence, unpredictable physical violence, sexual assault, taking my ideas for his/her own, infidelity, slander, being ostracized by others, being taken advantage of, talk about me behind my back (or being gossiped about?), being treated with contempt, antipathy, or unfairness by an important person, and other.

### **Development of a Measure of Appraisals of Trust and Betrayal:**

#### **Trust-Betrayal Inventory**

*Item Pool of the Trust-Betrayal Inventory.* To construct the Trust-Betrayal Inventory, 15 items were generated on the basis of the participants' narratives of the most distressing betrayal experiences. The experts first provided detailed feedback regarding the items generated in the qualitative analysis. These items were then reviewed by a number of Ph.D. and master's level clinical psychologists for the



redundancy, clarity, ambiguity, and pertinence. This review resulted in 12 items associated with individuals' appraisal of betrayal. After that, two Ph.D. experts provided feedback for these items, including whether or not they were ambiguous, easily understandable, or redundant. On the basis of these feedbacks, the author edited these items to be relevant to the targeted construct. The exemplary items were: he/she was dishonest in this event, he/she was disloyal in this event, and he/she did not protect me, etc.

**Internal Consistency.** The internal consistency of the Trust-Betrayal Scale was assessed by calculating Cronbach's alpha coefficients. The Cronbach's alpha coefficients for the Relationship Trust and Betrayal Appraisal were .92 and .89 respectively, indicating excellent internal consistency.

**Test-retest Stability.** The 6-week test-retest reliabilities of the Trust-Betrayal Scale were as follows: Relationship Trust,  $r = .42$ ; Betrayal Appraisal,  $r = .69$ . The results showed that the Relationship Trust Scale has an unsatisfactory test-retest stability, while the Betrayal Appraisal Scale displays moderate test-retest stability. Since the appraisals of the betrayal may be changed over time, the test-retest stabilities of the scale could be acceptable.

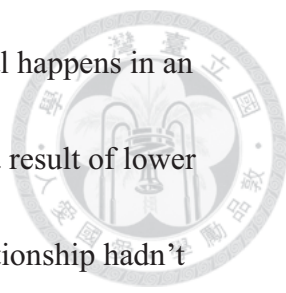
## Chapter 3 Study 1



The present study aimed to investigate: 1) whether betrayal experience can be a potential traumatic event and cause significant PTSD symptoms; 2) the correlations between subjective perceived betrayal (i.e., perceived betrayal severity and betrayal appraisals) and following variables: appraisals of the relationship (i.e., relationship intimacy, closeness, and trust), post-betrayal relationship change (i.e., relationship change), emotional reactions (i.e., negative emotions during the betrayal and current angry responses), and post-betrayal cognitive factors (i.e., dysfunctional cognitions and maladaptive cognitive strategies); 3) the correlations between the risk factors and PTSD symptoms (both acute and current PTSD symptoms in cross-sectional data), as well as the predictive effects of cognitive variables in current PTSD severity; and 4) the mediating role of post-betrayal dysfunctional cognitive factors (i.e., dysfunctional cognitions and maladaptive cognitive strategies) in the association between betrayal appraisal and PTSD symptoms.

### Method

**Participants.** Participants consisted of 272 (124 male and 148 female) young adults recruited from introductory psychology courses in National Taiwan University



and the Internet. Considering the definition of betrayal that “betrayal happens in an on-going trusting relationship”, four participants were excluded as a result of lower than 12 in the in the Relationship Trust Scale, which means the relationship hadn’t been trusted enough. The present study finally included 267 young adults (122 male and 145 female) with ages ranging from 18 to 35 ( $M = 21.16$ ,  $SD = 3.22$ ). All participants reported at least one lifetime betrayal experience (e.g., “had been gossiped about by a close friend”, “discovered a boyfriend’s secretly affair”, or “realized the partner didn’t treat me as a priority”, etc.). The majority of participants were undergraduate students (89.1%). Participants received course credit or 115 NTD/hour for participation in the study.

**Procedure.** The Institutional Review Board of the Department of Psychology, National Taiwan University, approved the study before any data collection was conducted. Participants signed informed consent via an online form before completing questionnaires online. After that, participants were instructed to provide a brief narrative of the most distressing betrayal experience in their lifetime, elaborate the nature of the relationship and betrayal as well as the appraisals of the relationship and betrayal, and rate the dysfunctional cognitions, maladaptive cognitive strategies. Participants were also asked to retrospect the PTSD symptoms one months after

betrayal and the PTSD symptoms in the current month.



## Measures

***Nature of the Relationship.*** Relationship type was assessed by the question:

*“what was the relationship between you and the person who betrays you?”*

Participants were asked to choose from five options: Family, Romantic partner, Friends/colleague, Teacher, or Other.

***Appraisal of the Relationship.*** The intimacy of the relationship was assessed by a 4-item self-report measure (e.g., *“I could receive emotional help and support from him/her in the past”*) using 3-point Likert scale (0 = totally disagree, 2 = totally agree). The closeness of the relationship was assessed by the item: *“how close were you and the person before the betrayal?”* (1 = not close at all, 7 = very close).

***Post-Betrayal Relationship Change.*** Relationship consistency was assessed by a yes-no question: *“after the betrayal, did you maintain the same relationship as before?”* Relationship change was assessed by the item: *“how did the betrayal change the relationship?”* (1 = became worse, 4 = did not change, 7 = became better).

***Nature of the Betrayal.*** The time since betrayal was assessed by asking *“how long has it been since the betrayal?”* Type of betrayal was assessed by the self-developed measure, which contain 15 betrayal types (see pilot study). Participants



were asked to select all that apply, and choose which most accurately describe his/her situation.

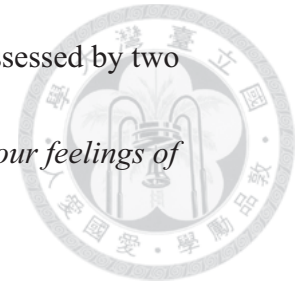


***The Appraisals of Trust and Betrayal.*** The level of trust and betrayal in relationship was assessed by the Trust-betrayal Inventory. It is a self-developed 12-item self-report measure. Each items contain two questions imply the trust and its violation, e.g., “I trusted him/her to be honest in the relationship” and “however, he/she was dishonest in this event”, scored on a 5-point Likert scale ranging from 0 (totally disagree) to 4 (totally agree), with a higher score indicating a higher level of trust or betrayal. The first part was calculated into the Relationship Trust index, the second part was calculated into the Betrayal Appraisal index. Each subscales show a good internal consistency reliability (Cronbach’s  $\alpha = .92$  and  $.89$ ) in this study.

Moreover, perceived severity of harm from the betrayal was measured by the item: “*how severely were you hurt by the betrayal?*” (1 = I wasn’t hurt at all, 7 = I was hurt deeply).

***Peri-Betrayal Negative Emotion.*** The Peri-betrayal Negative Emotion is a 10-item self-developed measure used to assess individual’s emotional responses during betrayal. Participants were asked to rate on a 5-point Likert scale ranging from 0 (totally disagree) to 4 (totally agree). It shows an adequate internal consistency reliability (Cronbach’s  $\alpha = .73$ ) in this study.

**Anger/Revenge Responses.** Current anger responses were assessed by two items: “*how angry are you at the betrayer?*” and “*how strong are your feelings of revenge toward the betrayer?*”



**Dysfunctional Cognitions.** The post-betrayal dysfunctional cognitions were assessed by the Posttraumatic Cognitions Inventory (PTCI; Foa et al., 1999). The PTCI is a 33-item self-report inventory comprises three subscales: negative cognitions about self (21 items), negative cognitions about the world (7 items), and self-blame (5 items). Only the negative cognitions about self and negative cognitions about the world were used in this study to assess an individual’s post- betrayal dysfunctional cognitions. Participants were asked to rate on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree), the higher the total score indicating stronger dysfunctional cognitions. The original PTCI subscales exhibits good internal consistency reliabilities (Cronbach’s  $\alpha = .87, .88, \text{ and } .86$ ). Three weeks test-retest reliabilities are  $.74$  (SELF),  $.75$  (WORLD),  $.89$  (BLAME), and  $.89$  (total scale). The PTCI showed a good convergent validity in measuring trauma-related cognitions, as well as good sensitivity and specificity in identifying individuals with and without PTSD (Foa et al., 1999). The Chinese version of PTCI (PTCI-C) also displays good reliability and validity (Su & Chen, 2008). For three subscale and total scale, the internal consistency are  $.96$  (SELF),  $.89$  (WORLD),  $.83$  (BLAME), and  $.96$  (total

scale), three to four weeks test-retest reliabilities are .80 (SELF), .80 (WORLD), .75 (BLAME), and .81 (total scale). Moreover, the PTCI-C demonstrates a good concurrent validity with PTSD, depression, and anxiety symptoms, as well as a good discriminative validity in identifying PTSD and no-PTSD group.

***Maladaptive Cognitive Strategies.*** Rumination and thought suppression were measured by the Response to Intrusion Questionnaire (RIQ; Clohessy & Ehlers, 1999). The RIQ is a 19-item self-report inventory used to assess individual's dysfunctional cognitive strategies of the intrusive betrayal memory. It shows an adequate internal consistency reliability (Cronbach's  $\alpha = .75$ ; Clohessy & Ehlers, 1999). The Chinese version of RIQ also has a good internal consistency reliability (Cronbach's  $\alpha = .85$ ; Su, 2011).

***PTSD Symptoms.*** The Posttraumatic Diagnostic Scale (PDS; Foa, 1995; Foa, Cashman, Jaycox, & Perry, 1997) was used to assess PTSD symptoms. The PDS includes 17 self-report items in accordance with PTSD symptoms criteria in DSM-IV. Participants were asked to rate how much they were bothered by each of the PTSD symptoms on a scale ranging from 0 (not at all or only one time) to 3 (5 or more times a week/almost always), and symptoms rated at 1 were counted as present. The PDS demonstrates good internal consistency ( $r = .92$ ) and test-retest reliability ( $r = .74$  for the diagnosis of PTSD and .83 for symptom severity), as well as satisfactory

sensitivity and specificity ( $r = .65$ ; agreement = 82%; sensitivity = .89; specificity = .75) as assessed with clinical diagnoses of PTSD (through a standardized diagnostic interview) and self-reported measures of depression and anxiety.



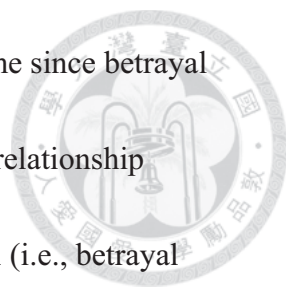
**Data Analysis.** All variables were computed using the SPSS 20.0 (SPSS, Inc., Chicago, Illinois, USA). The statistical plan of the four goals is introduced as below.

1) To test whether betrayal can cause significant PTSD symptoms, we used the PDS score to identify the probable PTSD individuals. According to Foa et al. (1997), one may be considered as probable PTSD when satisfying criteria B-D of PTSD (i.e., at least one symptom in criteria B, three symptoms in criteria C, and two symptoms in criteria D) as well as the total PDS score  $> 15$ .

2) The comparisons for categorical variables between probable PTSD group and non-PTSD group were conducted using chi-square test of homogeneity.

3) The Pearson correlation analyses were used to examine the association between key variables and perceived betrayal.

4) To test the predictive effects of the risk factors in betrayal-related PTSD, Pearson correlation analyses were first used to examine the association between these potential risk factors and PTSD symptoms. Hierarchical regression test was then used to test the proportion of each variability explained by the model. Variables were



entered by step in the following order: demographic data and the time since betrayal were entered in Step 1, the appraisals of the past relationships (i.e., relationship intimacy and trust) were entered in Step 2, the appraisals of betrayal (i.e., betrayal appraisal and perceived betrayal severity) were entered in Step 3, and the cognitive processing variables (i.e., dysfunctional cognitions and maladaptive cognitive strategies) were entered in Step 4. The order was following by our hypothesis: the appraisals of the past relationship may influence the appraisals of betrayal, leads to the negative cognitive processing, and causes current PTSD symptoms.

5) Finally, the mediation analysis procedure proposed by Preacher and Hayes (2004) was used to test the mediating role of dysfunctional cognitions and maladaptive cognitive strategies in the path from betrayal appraisals to PTSD severity.

## Results

**Betrayal-Related PTSD.** In our sample, 41.2% (n = 110) of the participants met the diagnostic criteria for probable PTSD (i.e., meeting PTSD criteria B to D; the PDS total score > 15) one month after betrayal, while 17.2% (n = 46) met the diagnostic criteria for probable PTSD currently.

**Group Comparison on Gender, Relationship, and Betrayal Type.** As shown

in Table 1, chi-square tests indicated that probable PTSD and non-PTSD groups did not significantly differ in gender [ $\chi^2(1, N = 267) = 0.43, p = .511$ ], betrayer's gender [ $\chi^2(1, N = 193) = 0.18, p = .670$ ], relationship type [ $\chi^2(4, N = 267) = .98, p = .913$ ], and betrayal type [ $\chi^2(15, N = 267) = 12.72, p = .624$ ].

**Possible Correlates of Perceived Betrayal.** As shown in Table 2, a strong relationship was noted between relationship intimacy/closeness/trust and perceived betrayal severity (intimacy,  $r = .18, p = .007$ ; closeness,  $r = .17, p = .028$ ; trust,  $r = .34, p < .001$ ). Yet only relationship trust was significantly related to betrayal appraisal (intimacy,  $r = -.09, p = .140$ ; closeness,  $r = .02, p = .796$ ; trust,  $r = .23, p < .001$ ). In regard to the emotional responses, the peri-betrayal negative emotion was strongly correlated with perceived betrayal severity ( $r = .51, p < .001$ ). The level of perceived betrayal severity was positively related to anger/revenge response (anger,  $r = .42, p < .001$ ; revenge,  $r = .26, p = .001$ ).

**Table 1. Group Comparison on Gender, Relationship, and Betrayal Type**

Variables	probable PTSD		non-PTSD		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Victim's Gender					0.43
Male ( <i>n</i> = 122)	19	41.3	103	46.6	
Female ( <i>n</i> = 145)	27	58.7	118	53.4	
Betrayer's Gender					0.18
Male ( <i>n</i> = 103)	22	56.4	81	52.6	
Female ( <i>n</i> = 90)	17	43.6	73	47.4	
Relationship Type					0.98
Family ( <i>n</i> = 32)	5	10.9	27	12.2	
Romantic Partner ( <i>n</i> = 55)	11	23.9	44	19.9	
Friend ( <i>n</i> = 169)	28	60.9	141	63.8	
Mentor ( <i>n</i> = 9)	2	4.3	7	3.2	
Other ( <i>n</i> = 2)	0	0.0	2	0.9	
Betrayal Type					12.72
1. Deception ( <i>n</i> = 33)	4	8.7	29	13.2	
2. Breaking promises ( <i>n</i> = 39)	10	21.7	29	13.2	
3. Abandonment ( <i>n</i> = 36)	6	13.0	30	13.7	
4. Revealing my secret ( <i>n</i> = 17)	3	6.5	14	6.4	
5. Unpredictable interpersonal isolation ( <i>n</i> = 41)	5	10.9	36	16.4	
6. Unpredictable verbal violence ( <i>n</i> = 12)	2	4.3	10	4.6	
7. Unpredictable physical violence ( <i>n</i> = 4)	0	0.0	4	1.8	
8. Sexual assault ( <i>n</i> = 2)	1	2.2	1	0.5	
9. Taking my ideas for his/her own ( <i>n</i> = 2)	0	0.0	2	0.9	
10. Infidelity ( <i>n</i> = 23)	5	10.9	18	8.2	
11. Slander ( <i>n</i> = 4)	1	2.2	3	1.4	
12. Being ostracized by others ( <i>n</i> = 11)	1	2.2	10	4.6	
13. Being taken advantage of ( <i>n</i> = 7)	1	2.2	6	2.7	
14. Being gossiped about ( <i>n</i> = 7)	0	0.0	7	3.2	
15. Being treated with contempt, antipathy, or unfairness by an important person ( <i>n</i> = 17)	6	13.0	11	5.0	
16. Other ( <i>n</i> = 10)	1	2.2	9	4.1	

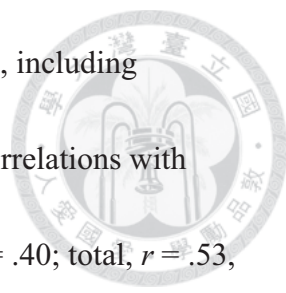


## Risk Factors of Betrayal-Related PTSD: A Cross-Sectional Analysis



***Pre-Betrayal Relationship.*** The Pearson correlations between appraisals of the pre-betrayal relationship and PTSD severity are reported in Table 2. Relationship intimacy and closeness neither significantly related to the severity of acute PTSD (intimacy,  $r = .10, p = .124$ ; closeness,  $r = .11, p = .166$ ) nor current PTSD (intimacy,  $r = -.06, p = .344$ ; closeness,  $r = -.05, p = .477$ ). Whereas relationship trust was significantly correlated to acute PTSD severity ( $r = .19, p = .002$ ), but not current PTSD severity ( $r = .08, p = .177$ ).

***Appraisals of Betrayal.*** Individuals' subjective appraisals of betrayal and perceived betrayal severity were significantly correlated to both acute PTSD (betrayal appraisal,  $r = .29$ ; perceived betrayal severity,  $r = .46, ps < .001$ ) and current PTSD (betrayal appraisal,  $r = .26$ ; perceived betrayal severity,  $r = .36, ps < .001$ ). In addition, as shown in Table 3, betrayal appraisal was positively correlated with four PTSD symptom clusters, both acute and current ( $ps < .01$  and  $< .001$ ). Specifically, the correlations between betrayal appraisal and symptoms of intrusion and arousal were higher in one month after betrayal than in the current month, whereas the correlations between betrayal appraisal and the symptoms of avoidance and numbing were higher in the current month than in one month after betrayal.



**Post-Betrayal Cognitive Variables.** Dysfunctional cognitions, including negative cognitions about self and the world, all displayed strong correlations with both acute PTSD severity (negative self,  $r = .53$ ; negative world,  $r = .40$ ; total,  $r = .53$ ,  $ps < .001$ ) and current PTSD severity (negative self,  $r = .63$ ; negative world,  $r = .46$ ; total,  $r = .63$ ,  $ps < .001$ ). Maladaptive cognitive strategies, including rumination and thought suppression, were also highly correlated to both acute PTSD severity (rumination,  $r = .59$ ; thought suppression,  $r = .45$ ; total,  $r = .59$ ,  $ps < .001$ ) and current PTSD severity (rumination,  $r = .58$ ; thought suppression,  $r = .46$ ; total,  $r = .59$ ,  $ps < .001$ ). Moreover, these post-betrayal cognitive variables and each four PTSD symptom clusters were all strongly positively correlated (as shown in Table 3,  $ps < .001$ ).

**Other Risk Factors.** Table 2 shows that peri-betrayal negative emotions were significantly correlated to acute PTSD severity ( $r = .51$ ,  $p < .001$ ) and current PTSD severity ( $r = .43$ ,  $p < .001$ ). Angry responses, including the level of anger and feeling of revenge, were significantly related to both acute PTSD severity (anger,  $r = .30$ ; revenge,  $r = .33$ ,  $ps < .001$ ) and current PTSD severity (anger,  $r = .47$ ; revenge,  $r = .39$ ,  $ps < .001$ ). The correlations between relationship change and PTSD severities were negatively significant (acute PTSD,  $r = -.25$ ,  $p = .001$ ; current PTSD,  $r = -.18$ ,  $p$

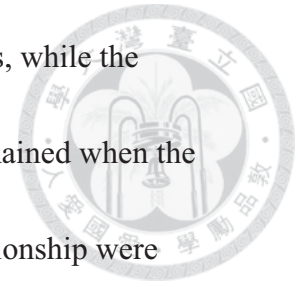
= .016).



**Brief Summary.** Betrayal appraisal, dysfunctional cognitions, and maladaptive cognitive strategies were found to correlate highly with PTSD symptoms of both acute and current; while no significant correlation was uncovered between appraisals of relationship and current PTSD symptoms. In addition, one would experience higher PTSD severity when he/she has been experiencing higher level of negatively emotional reactions during betrayal, higher levels of anger or revenge, or the relationship has become worse after betrayal. In regard to the correlations between these variables and one's perceived betrayal, relationship intimacy/closeness/trust, emotional responses, and betrayal appraisal were correlated positively and significantly with perceived betrayal severity. While one's perceived betrayal severity was higher, the relationship changed more negatively. On the same token, relationship trust, emotional responses, and perceived betrayal severity, were positively and significantly correlated with betrayal appraisal; while one's appraisal of betrayal was higher when the relationship change negatively.

**Hierarchical Regression Analyses.** The results of the hierarchical regression analyses predicting symptoms of PTSD are summarized in Table 4. As expected, the findings indicate that demographic characteristics and the appraisals of pre-betrayal

relationship could not significantly predict current PTSD symptoms, while the significant effect of betrayal appraisal predicted PTSD severity remained when the demographic characteristics and the appraisals of pre-betrayal relationship were controlled. Even though, betrayal appraisal could only explain 8% of the variance of current PTSD severity. When dysfunctional cognitions and maladaptive cognitive strategies were entered, the amount of variance explained rose to 51%, which indicates that post-betrayal cognitive processing may be a stronger predictor for current PTSD severity. Unexpectedly, relationship intimacy displayed a negative predicting effect in the full model, while the predicting effect of negative cognitions about the world was not significant. Finally, negative cognitions about self had the strongest predicting effect among all predictors in the full model.



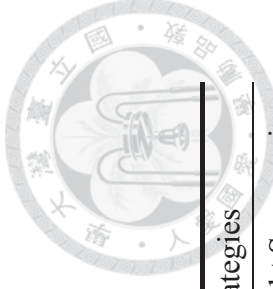


**Table 2. Means, Standard Deviations, and Correlation of Key Variables**

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	21.25	3.45														
2. Time since Betray.	49.51	47.58	.37***													
3. Rela. Intimacy	5.54	1.29	-.02	-.16												
4. Rela. Closeness	5.38	2.37	.06	-.07	.58***											
5. Rela. Trust	34.77	9.49	.08	-.03	.52***	.36***										
6. Rela. Change	2.33	1.28	-.06	-.05	-.02	-.10	-.11									
7. Peri. B. Severity	5.55	1.36	.11	.01	.18**	.17*	.34**	-.39***								
8. Peri. Neg. Emo.	22.90	7.50	.11	.00	.03	.05	.14*	-.23***	.51***							
9. Anger	3.66	2.00	.14	-.03	-.13	-.13	-.01	-.31***	.42***	.39***						
10. Revenge	2.09	1.58	.29	.04	-.15*	-.12	-.18*	-.27***	.26**	.36***	.57***					
11. Betrayal App.	32.83	10.40	.22	.07	-.09	.02	.23***	-.47***	.45***	.39***	.37***	.36***				
12. Dys. Cog.	79.94	31.41	.04	.05	-.06	.04	.03	-.26**	.34***	.42***	.26***	.25**	.34***			
13. Mal. Cog. Str.	14.59	9.30	.04	-.14	.02	.00	.15*	-.25**	.38***	.45***	.41***	.36***	.29***	.57***		
14. PTSD-acute	17.02	11.39	.02	-.15	.10	.11	.19**	-.25**	.46***	.51***	.30***	.33***	.29***	.53***	.59***	
15. PTSD-current	9.33	9.72	.13	-.03	-.06	-.05	.08	-.18*	.36***	.43***	.47***	.39***	.26***	.63***	.58***	.43***

*Note.* Betray. = betrayal; Rela. = relationship; Peri. B. = perceived betrayal; Peri. Neg. Emo. = peri-betrayal negative emotion; App = appraisal; Dys. Cog. = dysfunctional cognitions; Mal. Cog. Str. = maladaptive cognitive strategies; PTSD = posttraumatic stress disorder.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



**Table 3.** Correlation between Betrayal Appraisal, Dysfunctional Cognitions and PTSD Symptom Clusters

	Betrayal Appraisal		Dysfunctional Cognitions			Maladaptive Cognitive Strategies		
	Total	Negative self	Negative world	Total	Rumination	Thought Suppression		
PTSD-acute ( <i>n</i> = 264)								
Intrusion	.29***	.42***	.30***	.46***	.51***	.32***		
Avoidance	.20**	.27***	.32***	.49***	.34***	.50***		
Numbing	.20**	.53***	.38***	.55***	.54***	.44***		
Arousal	.29***	.50***	.37***	.50***	.55***	.33***		
Full PTSD	.29***	.53***	.40***	.59***	.59***	.45***		
PTSD-current ( <i>n</i> = 267)								
Intrusion	.20**	.51***	.36***	.48***	.47***	.37***		
Avoidance	.28***	.42***	.40***	.59***	.43***	.59***		
Numbing	.23***	.62***	.44***	.52***	.53***	.40***		
Arousal	.19**	.54***	.38***	.44***	.50***	.28***		
Full PTSD	.26***	.63***	.46***	.59***	.58***	.46***		

Note. PTSD = posttraumatic stress disorder.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Table 4. Hierarchical Regression Analysis: Predicting PTSD Severity**

Predictors	<i>B</i>	<i>SE B</i>	$\beta$	$R^2$	$\Delta R^2$
Step 1:				.02	.02
Gender	0.08	1.20	.00		
Age	0.38	0.19	.13*		
Step 2:				.03	.02
Gender	-0.23	1.21	-.01		
Age	0.35	0.19	.12		
Relationship Intimacy	-0.55	0.30	-.13		
Relationship Trust	0.16	0.08	.14*		
Step 3:				.08	.04
Gender	-0.75	1.19	-.04		
Age	0.22	0.19	.07		
Relationship Intimacy	-0.29	0.30	-.07		
Relationship Trust	0.07	0.08	.07		
Betrayal Appraisal	0.22	0.06	.23**		
Step 4:				.51	.43
Gender	0.32	0.88	.02		
Age	0.26	0.14	.09		
Relationship Intimacy	-0.46	0.23	-.11*		
Relationship Trust	0.03	0.06	.03		
Betrayal Appraisal	0.05	0.05	.05		
Dys.Cog.-Negative self	0.18	0.03	.44***		
Dys.Cog.-Negative world	-0.9	0.07	-.03		
Rumination	0.28	0.09	.16**		
Thought suppression	0.38	0.10	.23***		

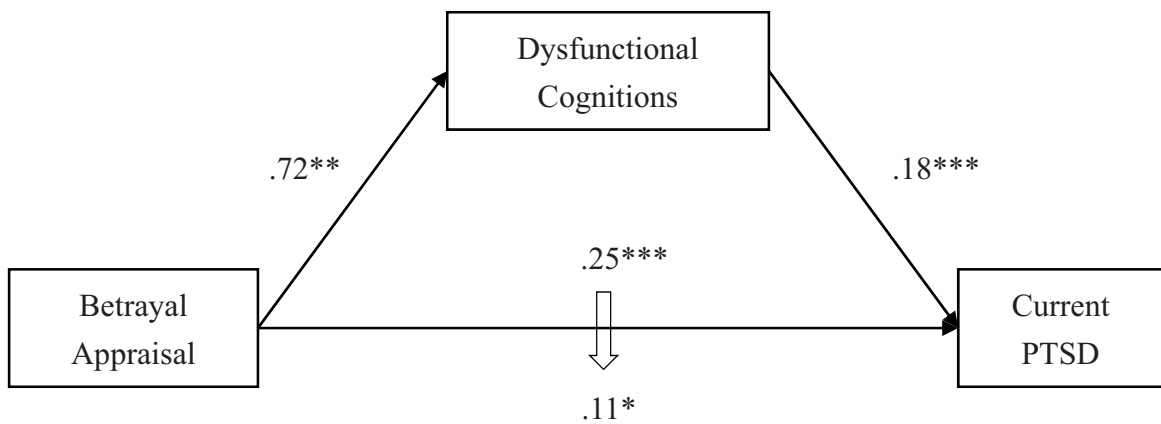
*Note.* PTSD = posttraumatic stress disorder, Dys.Cog.= dysfunctional cognitions.  
( $n = 267$ )

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Mediation Analyses.** As shown in Figure 1, mediation analyses indicated significant effects of betrayal appraisal on both dysfunctional cognitions ( $\beta = .72, p = .000$ ) and current PTSD severity ( $\beta = .25, p = .000$ ), respectively. Dysfunctional

cognitions was significantly associated with current PTSD severity ( $\beta = .18, p = .000$ ).

The effect of betrayal appraisal on current PTSD severity was significant after controlling for dysfunctional cognitions ( $\beta = .11, p = .016$ ). A significant mediating effect for betrayal appraisal on current PTSD severity via dysfunctional cognitions was found (indirect effect = .13; Sobel  $Z = 3.73, p = .000$ ; Bootstrapped 95% C.I. [0.07, 0.20]). The betrayal appraisal influences current PTSD severity through post-betrayal dysfunctional cognitions.



**Figure 1.** *Dysfunctional Cognition mediated the relationship between betrayal appraisal and PTSD severity.*

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

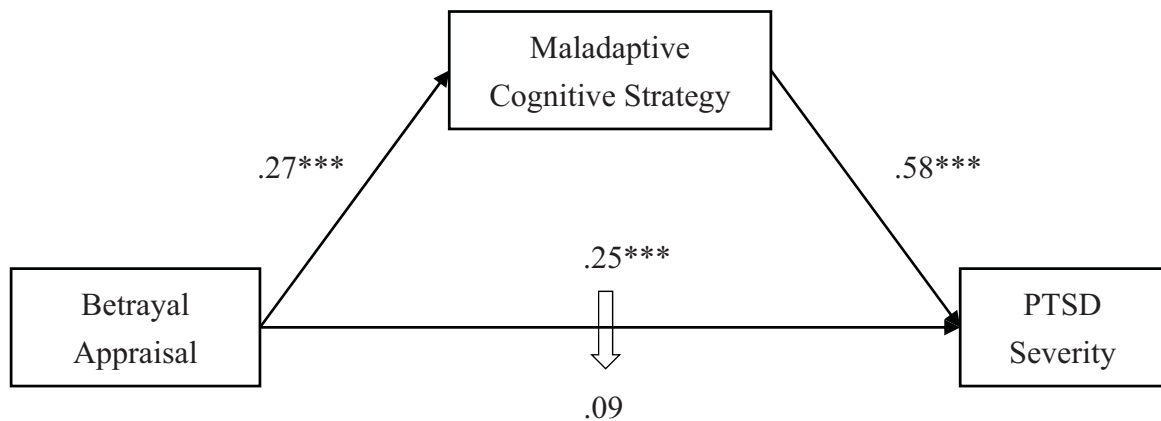
The mediating role of maladaptive cognitive strategies is shown in Figure 2.

Mediation analyses revealed significant effects of betrayal appraisal on both maladaptive cognitive strategies ( $\beta = .27, p = .000$ ) and current PTSD severity ( $\beta = .25, p = .000$ ), respectively. Maladaptive cognitive strategies was significantly associated with current PTSD severity ( $\beta = .58, p = .000$ ). The effect of betrayal appraisal on



current PTSD severity was non-significant after controlling for maladaptive cognitive strategies ( $\beta = .09, p = .066$ ). A significant complete mediating effect for betrayal appraisal on current PTSD severity via maladaptive cognitive strategies was found (indirect effect = .16; Sobel  $Z = 4.50, p = .000$ ; Bootstrapped 95% C.I.[0.09, 0.23]).

These findings show that betrayal appraisal influences current PTSD symptoms through the post-betrayal maladaptive cognitive strategies.



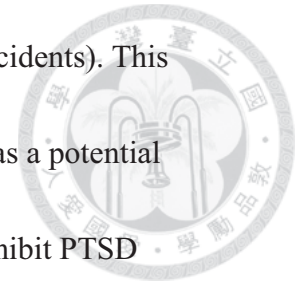
**Figure 2.** *Maladaptive Cognitive Strategy mediated the relationship between betrayal appraisal and PTSD severity.*

\*\*\*  $p < .001$ .

## Discussion

Several main findings emerged from this study. First, we found that betrayal can be a potential traumatic event. Specifically, one-fifth of the total sample met the criteria of probable PTSD. The results were comparable to those found in several

potentially traumatic events (e.g., natural disaster, motor vehicle accidents). This finding provides preliminary evidence that betrayal can be viewed as a potential trauma, and a noticeable percentage of betrayed individuals still exhibit PTSD symptoms currently.



Second, a subjective measure of betrayal was developed in this study to represent one's appraisal of betrayal. This measure addresses the limitation of lacking reliable measure of betrayal in earlier studies, and may provide a potentially useful tool for future investigation of perceived betrayal. Furthermore, our findings show that subjective appraisal of betrayal significantly predicted PTSD symptoms, suggesting that perceived betrayal might be a crucial risk factor for PTSD. In addition, earlier studies, which employed type of trauma and relationship closeness to estimate the extent of betrayal, run the risk of being ignorant of subjective aspect of betrayal and too arbitrary. In order to provide an alternative perspective of betrayal, the present study examined the difference between probable PTSD and non-PTSD group in the nature of relationship, appraisals of relationship, type of betrayal, subjective level of betrayal, post-betrayal cognitive processing, and other potential risk factors.

The associations between these risk factors and PTSD severity were also examined by correlation and regression analyses. The results showed that no significant group differences were noted in nature of relationship and betrayal, yet a

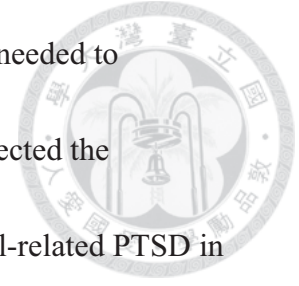
significant difference in betrayal appraisal and post-betrayal cognitive factors.

Moreover, betrayal appraisal, dysfunctional cognitions, and maladaptive cognitive strategies were all positively, significantly associated with PTSD severity, while the appraisals of the relationship were not. These findings contradicted the prior findings, which hypothesized that the type of trauma and relationship closeness can be used to represent the level of betrayal. Accordingly, the current study provides a new way to measure betrayal.

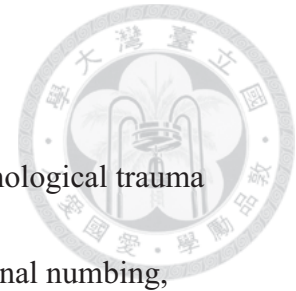
Last, a mediation model was proposed to explore the negative cognitive process after betrayal. Our findings confirm the hypothesis that betrayal can be viewed as a traumatic event. Based on contemporary trauma theories (e.g., Ehlers and Clark's PTSD model), betrayal events are likely to result in negative cognitions and maladaptive cognitive strategies, which in turn lead to PTSD. The findings show that post-betrayal dysfunctional cognitions and maladaptive cognitive strategies both significantly mediated the relationship between betrayal appraisal and current PTSD. This process is very similar to severe trauma such as assaultive violence.

In conclusion, the findings suggest that betrayal acts as a potential traumatic event because of its negative consequences and similar psychopathological process. One of the limitations for this study is the cross-sectional design, which does not allow a determination of the temporal relationship between betrayal appraisal,

dysfunctional cognitions, and PTSD. Thus, prospective studies are needed to conclusively establish their causal relationships. Therefore, we collected the follow-up data and examine a psychopathological model of betrayal-related PTSD in study 2.



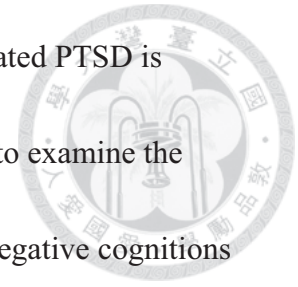
## Chapter 4 Study 2



Study 1 reveals that betrayal can be viewed as a harmful psychological trauma and may cause significant symptoms of PTSD, for instance, emotional numbing, avoidance of reminders of betrayal, intrusive images. The findings also highlight that the appraisal of betrayal may act as a crucial risk factor for PTSD via the betrayal-related dysfunctional cognitions and maladaptive cognitive strategies, independently. Study 1 provides cross-sectional data, however, it is unclear whether and how these risk factors influence one's subsequent PTSD symptoms. Therefore, we collected a two-wave data to test the influence of these risk factors on subsequent PTSD in this study.

In addition, the psychopathological model of betrayal-related PTSD also remains unclear. Study 1 reveals that dysfunctional cognitions and maladaptive cognitive strategies act as mediators in the path from betrayal appraisal to PTSD symptoms. That is, the victim's appraisals of betrayal influence PTSD symptoms through his/her dysfunctional cognitions or maladaptive cognitive strategies followed by betrayal. Accordingly, we speculated a psychopathological model of betrayal-related symptomatology, in which the interplay of appraisal of betrayal, dysfunctional cognitions, and maladaptive cognitive strategies predicted betrayal-related PTSD

symptoms. The proposed psychopathological model of betrayal-related PTSD is shown as Figure 3. The path analytic modeling approach was used to examine the relations among betrayal appraisal, dysfunctional cognitions (i.e., negative cognitions about self and the world), maladaptive cognitive strategies (i.e., betrayal-related thought suppression and rumination), and the current and subsequent PTSD symptoms.

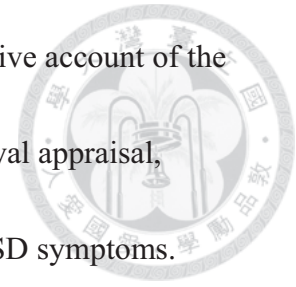


## Method

**Participants.** Participants were 107 (39 male and 68 female) young adults who reported at least one lifetime betrayal experience, and completed two-wave surveys. Participants were recruited from introductory psychology courses in National Taiwan University and the Internet. The sample ages ranged from 18 to 35 ( $M = 21.86$ ,  $SD = 3.81$ ). The majority of participants were undergraduate students (86%). Participants received course credit each or 115NTD per hour for participation in the study.

**Procedure.** The Institutional Review Board of the Department of Psychology, National Taiwan University, approved the study before any data collection was conducted. Participants first signed informed consent via an online form and then completed the baseline and follow-up survey, as following:

**Time 1.** Participants were instructed to provide a brief narrative account of the most distressing betrayal experience, to elaborate the level of betrayal appraisal, dysfunctional cognitions, maladaptive cognitive strategies, and PTSD symptoms.



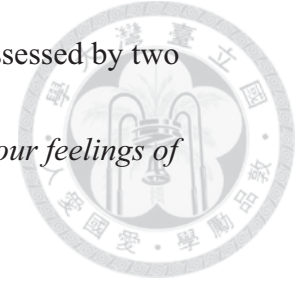
**Time 2 (6-week follow-up).** Participants were asked to report the PTSD symptoms pertaining to their betrayal experiences.

### **Measures**

**Betrayal Appraisal.** The Betrayal Appraisal Scale (BAS) showed a good internal consistency reliability (Cronbach's  $\alpha = .89$ ) in the sample of our pilot study. More details of the BAS can be found in Study 1.

**Post-Betrayal Relationship Change.** Relationship consistency was assessed by a yes-no question: "*after the betrayal, did you maintain the same relationship as before?*" Relationship change was assessed by the item: "*how did the betrayal change the relationship?*" (1 = became worse, 4 = did not change, 7 = became better).

**Peri-Betrayal Negative Emotion.** The Peri-betrayal Negative Emotion is a 10-item self-developed measure used to assess individual's emotional responses during betrayal. Participants were asked to rate on a 5-point Likert scale ranging from 0 (totally disagree) to 4 (totally agree). It shows an adequate internal consistency reliability (Cronbach's  $\alpha = .73$ ) in this study.



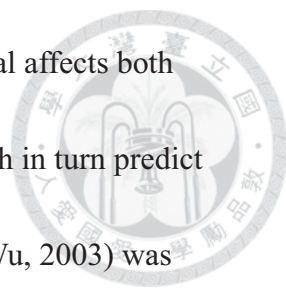
**Anger/Revenge Responses.** Current anger responses were assessed by two items: “*how angry are you at the betrayer?*” and “*how strong are your feelings of revenge toward the betrayer?*”

**Dysfunctional Cognitions.** Negative cognitions about self and negative cognitions about the world from the Posttraumatic Cognitions Inventory (PTCI; Foa et al., 1999) were used to assess an individual’s post-betrayal dysfunctional cognitions. The original version (Foa et al., 1999) and Chinese version (PTCI-C; Su & Chen, 2008) both demonstrate good reliability and validity. More details of the PTCI can be found in Study 1.

**Maladaptive Cognitive Strategies.** Rumination and thought suppression from the Response to Intrusion Questionnaire (RIQ; Clossy & Ehlers, 1999) were used to assess individual’s maladaptive cognitive strategies. The RIQ showed an adequate internal consistency reliability (Cronbach’s  $\alpha = .75$ ). The Chinese version of RIQ also had a good internal consistency reliability (Cronbach’s  $\alpha = .85$ ; Su, 2011). More details of the RIQ can be found in Study 1.

**PTSD Symptoms.** The Posttraumatic Diagnostic Scale (PDS; Foa, 1995; Foa et al., 1997) was used to assess an individual’s PTSD symptoms. The PDS demonstrated good reliability and validity. More details of the PDS can be found in Study 1.





**Data Analysis.** We examined the model that betrayal appraisal affects both dysfunctional cognitions and maladaptive cognitive strategies, which in turn predict time 1 PTSD and time 2 PTSD. The EQS 6.0 software (Bentler & Wu, 2003) was used to perform the path analysis. Several statistical indices were used to examine the fit of the models to the data, including the  $\chi^2$  or Satorra-Bentlerhi  $\chi^2$  (S-B  $\chi^2$ ) (if the data violates the assumption of normal distribution), comparative Fit Index (CFI), incremental fit index (IFI), standardized root mean square residual (SRMR), root-mean-square error of approximation (RMSEA), and Akaike information criterion (AIC).

Nonsignificant  $\chi^2$  or S-B  $\chi^2$  values (i.e.,  $p > .05$ ) are indicative of good fit. CFI and IFI values between .90 (acceptable cutoff value) and .95 (ideal cutoff value) are considered to indicate good model fit (Bentler & Wu, 2003; Hu & Bentler, 1999). SRMR values below .10 would be acceptable, whereas below .08 would be ideal. RMSEA values below .08, with the lower bound of a 90% confidence interval (CI)  $< .05$ , were considered to indicate adequate fit; whereas RMSEA values below .06 were considered to indicate a good fit (Browne, Cudeck, Bollen, & Long, 1993). The AIC value can be used for model comparison and model choosing, with a smaller value indicating a better model fitness. If the model fits the data well, the non-standard and standard solutions should be considered for estimating the effects of

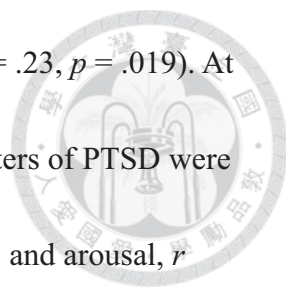
each path.

Moreover, we considered the Lagrange Multiplier (LM) test and Wald test for model modification. The LM test was used to assess whether adding certain parameter could improve the goodness of fit, while the Wald test was used to assess whether dropping certain parameter would not influence the goodness of fit. As Ullman (2006) suggested, model modification should first consider adding parameters, then considered dropping parameters. Thus, the results of LM test should be consider before the Wald test. Finally, the direct and indirect effects of betrayal appraisal on PTSD symptoms were also tested. A bootstrap resampled (5,000) procedure was used to calculate indirect effect.

## Results

**Risk Factors of Betrayal-Related PTSD: A Prospective Analysis.** Pearson correlations among key variables are presented in Table 5. Pearson correlations between cognitive risk factors and symptoms of PTSD are presented in Table 6. Pearson correlations among other risk factors and PTSD severity are presented in Table 7.

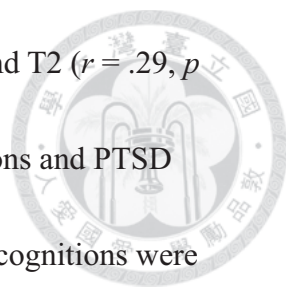
***Betrayal Appraisal.*** As shown in Table 5, betrayal appraisal was significantly



related to both PTSD severity at T1 ( $r = .25, p = .009$ ) and at T2 ( $r = .23, p = .019$ ). At T1, correlations between betrayal appraisal and three symptom clusters of PTSD were significant (avoidance,  $r = .26, p = .006$ ; numbing,  $r = .26, p = .007$ ; and arousal,  $r = .20, p = .043$ ); yet, correlation between betrayal appraisal and intrusion was not significant (intrusion,  $r = .16, p = .101$ ). At T2, correlations between betrayal appraisal and three symptom clusters of PTSD were significant (intrusion,  $r = .26, p = .007$ ; avoidance,  $r = .21, p = .034$ ; and arousal,  $r = .20, p = .035$ ); yet, correlation between betrayal appraisal and numbing was not significant (numbing,  $r = .05, p = .619$ ).

Among two subscales of dysfunctional cognitions, betrayal appraisal was significantly related to negative cognitions about self ( $r = .29, p = .002$ ), but not about the world ( $r = .10, p = .322$ ). In regard to maladaptive cognitive strategies, betrayal appraisal was significantly related to both rumination ( $r = .24, p = .015$ ) and thought suppression ( $r = .25, p = .025$ ).

***Dysfunctional Cognitions.*** Table 5 shows that total score of dysfunctional cognitions was highly correlated with PTSD severity at T1 ( $r = .60, p < .001$ ) and T2 ( $r = .45, p < .001$ ). Negative self was significantly correlated to PTSD severity at T1 ( $r = .60, p < .001$ ) and T2 ( $r = .45, p < .001$ ), and negative world was also



significantly correlated to PTSD severity at T1 ( $r = .44, p < .001$ ) and T2 ( $r = .29, p = .002$ ). In regard to the correlations between dysfunctional cognitions and PTSD symptom clusters, the results (see Table 6) show that dysfunctional cognitions were significantly related to almost all PTSD symptom clusters, except avoidance was not significant related to negative cognitions about the world ( $r = .18, p = .071$ ).

***Maladaptive Cognitive Strategies.*** Table 5 shows that maladaptive cognitive strategies displayed strong correlations with PTSD severity at T1 ( $r = .55, p < .001$ ) and T2 ( $r = .51, p < .001$ ). Rumination was significantly related to PTSD severity at T1 ( $r = .52, p < .001$ ) and T2 ( $r = .49, p < .001$ ), and negative world was significantly related to PTSD severity at T1 ( $r = .46, p < .001$ ) and T2 ( $r = .41, p = .002 < .01$ ). Table 6 shows that maladaptive cognitive strategies were highly correlated with all four symptom clusters of PTSD ( $ps < .01$  and  $.001$ ).

***Other Risk Factors.*** Pearson correlations between other risk factors and PTSD severity are reported in Table 7. As expected, perceive betrayal severity was significantly correlated to PTSD severity at T1 ( $r = .43, p < .001$ ) and at T2 ( $r = .39, p < .001$ ). Peri-betrayal emotional responses were significantly correlated to PTSD severity at T1 ( $r = .41, p < .001$ ) and at T2 ( $r = .44, p < .001$ ). Angry responses, including the level of anger and feeling of revenge, were significantly related to PTSD

severity at T1 (anger,  $r = .34, p < .001$ ; revenge,  $r = .27, p = .006$ ) and T2 (anger,  $r = .37, p < .001$ ; revenge,  $r = .29, p = .002$ ). Significant correlation was also noted between T1 PTSD and T2 PTSD severity ( $r = .58, p < .001$ ). Unexpectedly, relationship change was not significantly related to PTSD severity at T1 ( $r = -.14, p = .157$ ) and at T2 ( $r = -.09, p = .377$ ).

**Path Analysis: Psychopathological Model of Betray-Related PTSD.** Path

analysis was used to estimate the fit of the hypothesized model. The results are shown in Figure 3: S-B  $\chi^2 (1, N = 107) = .30, p = .58$ ; CFI = 1.00; IFI = 1.00; RMSEA = .00 (90% CI = [.00, .21]); SRMR = .01; AIC = -1.70. The S-B  $\chi^2$  value was nonsignificant, and values of CFI, IFI, RMSEA as well as SRMR all achieved excellent results, indicating that the hypothesized model demonstrated excellent fit. Moreover, the paths from betrayal appraisal to T1 PTSD severity and dysfunctional cognitions, as well as the path from dysfunctional cognitions to T2 PTSD severity were nonsignificant.



**Table 5. Pearson Correlation of Key Variables**

Variables ( <i>n</i> = 107)	1	2	3	4	5	6	7	8
1. Betrayal Appraisal								
2. Dys. Cog. - Negative Self	.10							
3. Dys. Cog. - Negative World	.29*	.61***						
4. Dys. Cog. - Total	.17	.97***	.79***					
5. Mal. Cog. Str. - Rumination	.24*	.51***	.31**	.49***				
6. Mal. Cog. Str. - Thought Suppression	.25*	.36***	.32**	.38***	.52***			
7. Mal. Cog. Str. - Total	.27**	.49***	.36***	.49***	.85***	.89***		
8. T1 PTSD	.25**	.60***	.44***	.60***	.52***	.46***	.55***	
9. T2 PTSD	.23*	.45***	.29***	.45***	.49***	.41***	.51***	.58***

*Note.* Dys. Cog. = Dysfunctional Cognitions, Mal. Cog. Str. = Maladaptive Cognitive Strategies, PTSD = posttraumatic stress disorder.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



**Table 6.** Correlation between Betrayal Appraisal, Dysfunctional Cognitions and PTSD Symptoms

PTSD Symptoms ( <i>n</i> = 107)	Betrayal Appraisal		Dysfunctional Cognitions			Maladaptive Cognitive Strategies		
	Betrayal	Appraisal	Total	Negative self	Negative world	Total	Rumination	Thought Suppression
<b>T1 PTSD</b>								
Intrusion	.16		.54***	.54***	.38***	.42***	.42**	.32***
Avoidance	.26**		.45***	.39***	.45***	.59***	.41***	.60***
Numbing	.26**		.56***	.57***	.36***	.51***	.47***	.44***
Arousal	.20*		.48***	.49***	.33**	.41***	.46***	.26**
Full PTSD	.25**		.60***	.60***	.44***	.55***	.52***	.46***
<b>T2 PTSD</b>								
Intrusion	.26**		.37***	.36***	.28**	.41***	.41***	.31**
Avoidance	.21*		.25*	.25*	.18	.46***	.35***	.46***
Numbing	.05		.37***	.38***	.24*	.37***	.36***	.30**
Arousal	.20*		.45***	.48***	.26**	.44***	.47***	.32**
Full PTSD	.23*		.45***	.45***	.29**	.51***	.49***	.41***

Note. PTSD = posttraumatic stress disorder.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

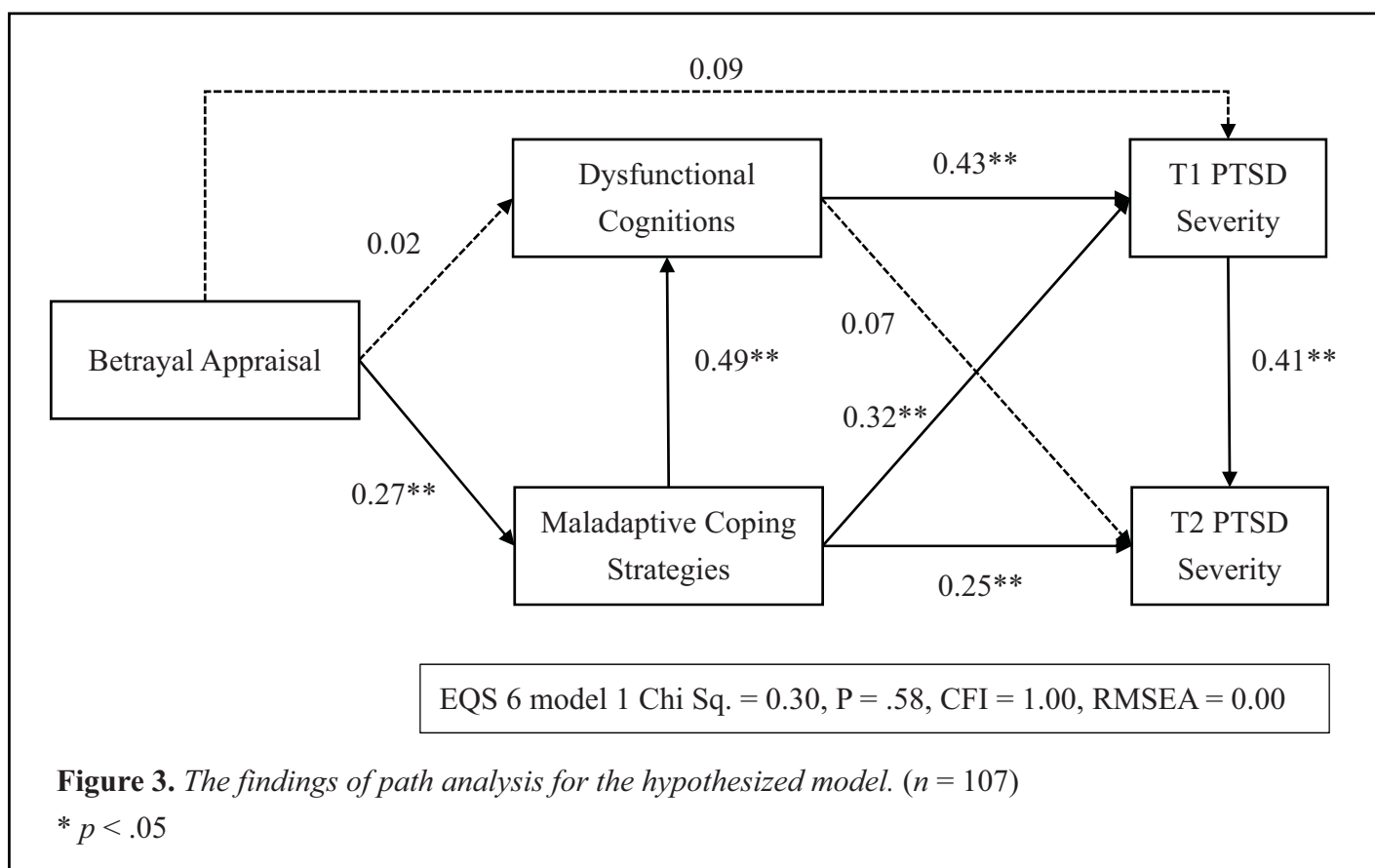


**Table 7.** Pearson Correlation of Other Risk factors

Variables ( <i>n</i> = 107)	1	2	3	4	5	6
1. Relationship Change						
2. Perceived Betrayal Severity	-.26**					
3. Emotional Responses	-.24*	.49***				
4. Anger	-.34***	.45***	.43***			
5. Revenge	-.39***	.26**	.32**	.54***		
6. T1 PTSD	-.14	.43***	.41***	.34***	.27**	
7. T2 PTSD	-.09	.39***	.44***	.37***	.29**	.58***


Note. PTSD = posttraumatic stress disorder.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



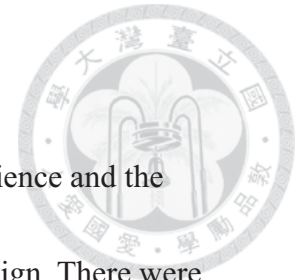


## Discussion



Study 2 resulted in two main findings. First, we found that betrayal appraisal, dysfunctional cognitions, and maladaptive cognitive strategies are the possible cognitive risk factors of both current and subsequent betrayal-related PTSD. In addition, victim who perceived more hurt from betrayal, experienced more negative emotions during betrayal, and had angrier responses to betrayal, reported a higher PTSD severity. Second, we tested the possible mechanism for post-betrayal symptomatology. The findings demonstrate that subsequent betrayal-related PTSD is caused by interplay of the subjective appraisal of betrayal, dysfunctional cognitions, maladaptive cognitive strategies, and current PTSD severity. Specifically, path analysis indicated that betrayal appraisal affects dysfunctional cognitions via maladaptive cognitive strategies, and both of them influence current PTSD. Furthermore, current PTSD severity and maladaptive cognitive strategies both significantly predict persistence PTSD in this model. These results advance our understanding of the psychopathological model of subsequent betrayal-related PTSD.

## Chapter 5 General Discussion



The present study examined the associations of betrayal experience and the following PTSD symptoms in a cross-sectional and prospective design. There were four main findings in the present study. First, our finding provided initial evidence for the existence of betrayal-related PTSD. Second, the results indicated that betrayal appraisal was associated with PTSD symptoms and the path of betrayal appraisal to PTSD was mediated by dysfunctional cognitions and maladaptive cognitive strategies. These findings support the claim that betrayal can be viewed as a potentially traumatic event. Third, regarding the risk factors of betrayal-related PTSD we proposed, the results revealed that subjectively perceived betrayal and its severity, emotional responses, and post-betrayal cognitive variables (i.e., dysfunctional cognitions, maladaptive cognitive strategies) all demonstrated strong correlations with concurrent and subsequent PTSD symptoms. However, the correlations between appraisals of relationships and PTSD symptoms were nonsignificant, except for the relationship trust-acute PTSD symptoms association. Finally, we proposed a psychopathological model of betrayal-related PTSD. Path analysis indicated that the model displayed excellent fit to the data. In conclusion, these findings indicate that betrayals may serve as potentially traumatic events and cause significant PTSD

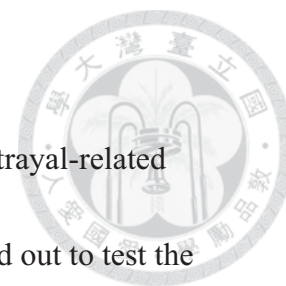
symptoms, especially for those individuals who have involved those risk factors or holding the dysfunctional cognitions and maladaptive cognitive strategies following the betrayals.



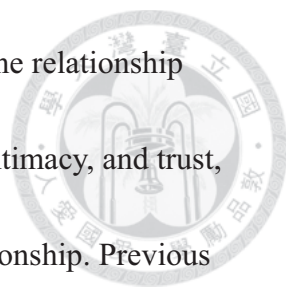
### **Betrayal as a Potentially Traumatic Event**

Among the participants with betrayal experience, 17.0% demonstrated clinically significant PTSD symptoms specifically related to betrayal, indicating that betrayal can result in severe trauma-related distress. This finding is in line with clinical observations that PTSD symptoms exist within people with betrayal experiences. The mediation analysis found significant indirect effects for betrayal appraisal on PTSD via dysfunctional cognitions and maladaptive cognitive strategies, independently. As noted in the introduction, the cognitive factors followed by a traumatic event have been supported to contribute to the maintenance of PTSD (Amir et al., 1997; Ehlers & Clark, 2000; Ehlers et al., 1998; Morgan et al., 1995). Thus, the current findings may imply that dysfunctional cognitive processing following a betrayal experience is similar to that of other common potentially traumatic events (e.g., assault, accident). Our study provides initial evidence that betrayal can be seen as a potentially traumatic event. Following this statement, the risk factors of betrayal-related PTSD may also be of interest.

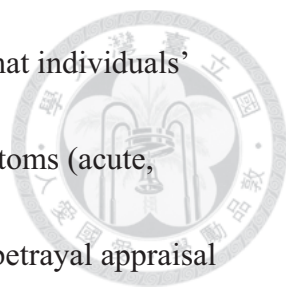
## Risk Factors for Betrayal-Related PTSD



The present study examined several possible risk factors of betrayal-related PTSD. Correlation analyses and hierarchical regression were carried out to test the associations and predictive effects of these risk factors to PTSD symptoms. Based on the correlation analyses, the variables that were positively related to current PTSD symptoms were: peri-betrayal negative emotions, betrayal appraisal, perceived betrayal severity, levels of anger and revenge, post-betrayal dysfunctional cognitions, and maladaptive cognitive strategies. In contrast, relationship type, time since betrayal, and appraisals of the relationship did not display significant correlations with current PTSD symptoms. The hierarchical regression demonstrated that negative cognitions about self, rumination, and thought suppression all significantly predicted PTSD severity after controlling for demographic characteristics, appraisals of pre-betrayal relationships, and betrayal appraisal. Moreover, the prospective examination showed that victims' emotional responses (i.e., peri-betrayal emotional responses, anger response, and feeling of revenge), subjective perceptions of betrayal (i.e., perceived betrayal severity and betrayal appraisal), and negative cognitive factors (i.e., dysfunctional cognitions and maladaptive cognitive strategies), were significantly associated with subsequent PTSD severity.



**Appraisals of the Relationship.** In this study, appraisals of the relationship with betrayer before the occurrence of betrayal include closeness, intimacy, and trust, which represent strong and meaningful assumptions in a close relationship. Previous studies have indicated that when asked to recall betrayal experiences, participants usually reported the betrayals committed by people who were closest to them (Williamson & Gonzales, 2007; Younger, Piferi, Jobe, & Lawler, 2004). A betrayal by a close individual is assumed to be more harmful than that of an acquaintance, given that we generally believe that people whom we are close to apt to care about our well-being, and this kind of betrayal would be more unexpected and damaging. However, inconsistent with prior theoretical viewpoint (Dixon, 2009), we found that closeness, intimacy, and trust of the relationships were not significantly related to current PTSD symptoms. In fact, this finding partially replicated prior finding that individuals perceived less severity of betrayal in a closer relationship than a distant one (Dixon, 2009). The inconsistent findings suggest that the association between closeness/intimacy/trust and PTSD symptoms may vary as a function of some variable (i.e., moderating effect). For instance, forgiveness may be a possible candidate, in that people are more willing to forgive betrayal when it is committed by someone closed (Dixon, 2009; McCullough et al., 1998).



**Appraisals of Betrayal.** Our result supports the hypothesis that individuals' appraisals of betrayal had a significant correlation with PTSD symptoms (acute, current, and follow-up). This finding supported the hypothesis that betrayal appraisal plays a crucial role in the development of PTSD, which is also in accord with hypothesis that the appraisal of betrayal influences the maintenance of PTSD. Moreover, the hierarchical regression reveals that the predictive effect of betrayal appraisal to PTSD severity remains significant after controlling for demographic characteristics and appraisals of pre-betrayal relationship. In sum, the findings the present study seems to imply that betrayal contributes to the persistence of PTSD symptoms.

In addition, the findings highlight the importance of using subjective measures of betrayal, rather than the objective measures (e.g. Brief Betrayal Trauma Survey; BBTS; Goldberg & Freyd, 2003). This supports the criticism of assessing betrayal in terms of the objective viewpoints (Kelley et al., 2012). Despite the insignificant group difference between probable PTSD and non-PTSD in relationship type (whether the relationship between victim and betrayer is family, couple, friend, mentor, or other), there are still many confounding variables. Because of the diversity of the interactions within a relationship, we need to exercise caution in the interpretation of this finding.

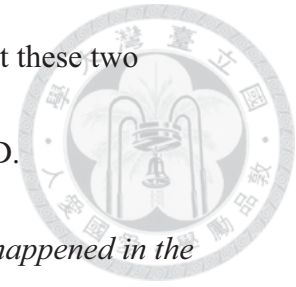
In sum, the findings are insufficient to simply conclude that relationship type is not

associated with one's PTSD symptoms. We suggest that future study should consider both objective and subjective measures of betrayal and investigate the differences between them.



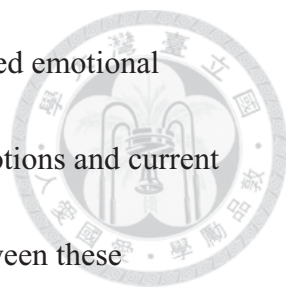
**Maladaptive Cognitive Factors.** Two maladaptive cognitive factors were tested in the present study: dysfunctional cognitions and maladaptive cognitive strategies, which are suggested to be important maintaining factors of PTSD. The significant group differences of dysfunctional cognitions and maladaptive cognitive strategies were found between probable PTSD and non-PTSD groups. This finding is consistent with previous findings that PTSD individuals hold negative beliefs of self and the world, compared to non-PTSD survivors (Beck et al., 2004; Foa et al., 1999; Startup et al., 2007). The correlation analyses showed that dysfunctional cognitions and maladaptive cognitive strategies were both strongly correlated with PTSD symptoms (acute, current, and follow-up). Regression analysis revealed that dysfunctional cognitions and maladaptive cognitive strategies altogether contributed an additional 43% for the variance explained, suggesting that these post-betrayal cognitive factors are central to betrayal-related PTSD. Moreover, the mediation analyses demonstrate that appraisals of betrayal influenced PTSD symptoms through dysfunctional cognitions and maladaptive cognitive strategies, independently. The

findings are in accordance with Ehler and Clark's (2000) model that these two cognitive factors play an important role in the maintenance of PTSD.



Another interesting question is “*why and how a betrayal that happened in the past is associated with an individual's current emotional distress?*” A possible explanation lies in the concept of *sense of serious, current threat* that is central to persistent PTSD (Dunmore et al., 2001; Ehlers & Clark, 2000). It is not only betrayal appraisal that generates PTSD symptoms, but also the sense of current threat that causes one's persistent emotional distress. The sense of current threat is associated with excessively negative appraisals of the trauma, whereas the maladaptive cognitive processing style may prevent changes in negative appraisals of trauma which, in turn, cause PTSD (Ehlers & Clark, 2000). In the present study, dysfunctional cognitions act as negative appraisal of trauma, while rumination and thought suppression act as maladaptive cognitive strategies. Based on this knowledge, it is possible that appraisals of betrayal induce an individual's dysfunctional cognitions and maladaptive cognitive strategies, which generate the sense of current threat that in turn leads to PTSD. Thus, it is plausible to assume that dysfunctional cognitions and maladaptive cognitive strategies followed by betrayals enhance and maintain one's emotional distress.





**Betrayal-Related Emotional Responses.** The betrayal-related emotional responses examined in this study include peri-betrayal negative emotions and current angry/revenge responses. The results show a strong correlation between these emotional responses and PTSD symptoms (acute, current, and follow-up), suggesting that emotional responses may be central to betrayal-related PTSD. Indeed, negative emotional responses have been shown to be one of the key variables in the occurrence and maintenance of PTSD (Ozer, Best, Lipsey, & Weiss, 2003). Our findings are in agreement with this result and justify the importance of emotional experiences during and after betrayal. Besides the emotional response per se, “*how individual interpret their emotional responses*” during trauma was associated with one’s current distress (Dunmore et al., 2001). Future study could investigate how individual’s appraisal of negative emotional responses affects PTSD symptoms.

**Psychopathological Model of Betrayal-related PTSD.** On the basis of cognitive theories of trauma (e.g., Ehlers & Clark, 2000), we investigated the possible mechanism for post-betrayal symptomatology in Study 2. The path analysis indicated that betrayal appraisal indirectly influenced PTSD symptoms via the path from maladaptive cognitive strategies to dysfunctional cognitions. This finding accentuates the important role these two cognitive factors, along with initial PTSD severity, play in

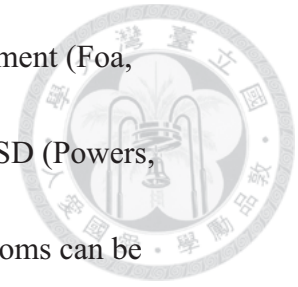
the maintenance of betrayal-related PTSD.



## **Clinical Implication**

The phenomenon of betrayal has been ignored in the field of psychology for a long time, and we attempt to fill in this gap by detailed investigation of betrayal experiences as well as harmful consequences of betrayal experiences. As mentioned earlier, the findings of this study suggest that betrayal can be regarded as a potentially traumatic event. Betrayal can result in negative cognitions about self and the world, which in turn cause emotional distress such as PTSD-like symptoms. These findings highlight the negative impact of betrayal experiences on young adults, and have several implications for clinical intervention. First, clinician, when seeing clients, are suggested to pay attention on whether they had exposed to severe betrayal experiences or not, as these events may severely challenge one's assumptions of self and world, causing significant distress. When confronting the clients who are suffering from betrayal experiences currently, clinicians are suggested to note that catastrophic betrayal is similar to traumatic events in essence; given the current findings that several betrayal will cause significant emotional distress, dysfunctional conceptualization of self and the world as well as prominent PTSD-like symptoms. Accordingly, the principles and interventions used to treat trauma survivors may also

apply to betrayal victims. For instance, in prolonged exposure treatment (Foa, Hembree, & Rothbaum, 2007), an evidence-based approach for PTSD (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010), trauma-related symptoms can be alleviated through the use of vivo exposure to avoided trauma-related situations and imaginal exposure to the traumatic event (revisiting of the traumatic memory in imagination). Both procedures might be used for individuals who avoid talking about betrayal experience or are afraid of approaching things that remind of the betrayal.



## Chapter 5. The Contributions and Limitations

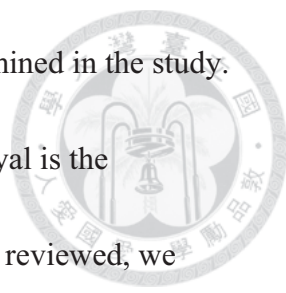


### Study Contributions

Betrayal is a harmful psychological trauma that could happen in everyone's life. Understanding the concept and consequences of betrayal would help clinician to take care of people who have been betrayed. The present study provides a preliminary research into betrayal and its consequences. To date, this is the pioneer study we are aware of that conceptualizes betrayal as a potentially traumatic event and examine the following PTSD symptoms. The present study also collected participants' general betrayal experiences, instead of focusing merely on a specific betrayal event, such as infidelity or childhood abuse.

The empirical studies of betrayal are limited due to a number of reasons. One possible reason is the lack of reliable measure of betrayal. Previous studies have either viewed betrayal as an objective concept (Freyd, 1996), used a single-item survey (Kelley et al., 2012), or calculated the frequency of the listed betrayal events (Finholt, 2011), to represent the level of betrayal. To address the limitation of prior studies (e.g., a single-item survey) and get a deeper understanding of betrayal, the present study constructed a self-report measure of betrayal and examined its relationships with PTSD symptoms. Moreover, the unique contribution of betrayal appraisal on PTSD relative

to other plausible risk factors (e.g., relationship closeness) was examined in the study.



The second obstacle of conducting empirical research on betrayal is the complexity of betrayal. According to the observations and literature reviewed, we conceptualized betrayal as a potentially traumatic event. Based on this assumption, this study proposed several variables that have been suggested to maintain PTSD symptoms as the risk factors of betrayal-related PTSD. The results confirmed the view that betrayal could be conceptualized as a potentially traumatic event. Furthermore, the relationships of the risk factors and PTSD severity, as well as the predictive effects of post-betrayal cognitive factors were examined in the study. To our knowledge, this is the first study to investigate several possible risk factors for betrayal-related PTSD, including the nature of betrayal, relationship type, appraisals of the relationship, emotional responses, betrayal appraisal, and post-betrayal cognitive factors. In addition, the present study examined the plausible psychopathological model of betrayal-related PTSD. And such finding may advance our understanding of the maintenance of betrayal-related PTSD.

In brief, six of our main contributions are: 1) development of a subjective measure of betrayal; 2) providing the evidence of betrayal-related PTSD; 3) justifying why and how betrayal is similar to a potentially traumatic event; 4) underscoring the role of betrayal appraisal and post-betrayal cognitive factors in betrayal-related PTSD; 5)

discovery of a number of risk factor for betrayal-related PTSD; and 6) development and examination of psychopathological model of betrayal-related PTSD.



## **Study Limitations**

Several limitations warrant noted in the interpretation of the current findings.

First, the participants were homogenous in terms of age, educational level, and occupation. Most participants were undergraduate students who tend to represent a higher functioning group. This might lead to a problem of restricted range of score and small within-group variability. Generalizability of our findings to other populations is unclear and needs further investigation. Second, our findings are preliminary and warrant further replication. Further research should replicate these findings and explore whether or not there are any other factors that can link betrayal and trauma together. Last, the present study associated betrayal to a traumatic event, but did not compare the differences between the two. We believe that there are some critical differences. Thus, these findings are not capable of leading us to the conclusion that betrayal is exactly a traumatic event.

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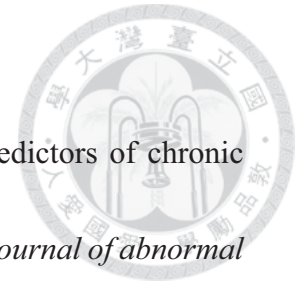
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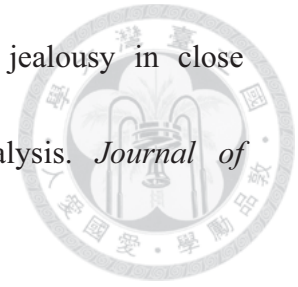
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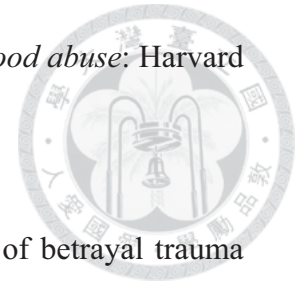
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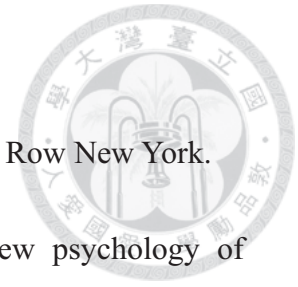
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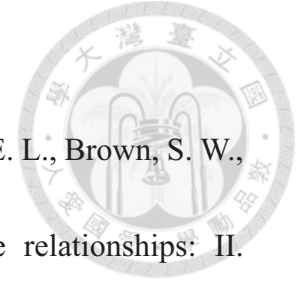
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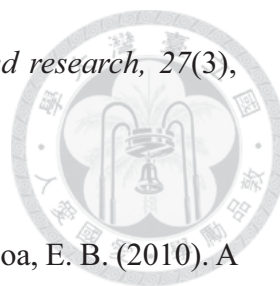
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# Appendix A

## 參與研究同意書

國立臺灣大學心理學研究所



親愛的同學，您好：

本研究名稱為**負向認知對經歷背叛事件後相關症狀之影響**首先，感謝您參與本次的研究。此研究之主要目的在於瞭解你在經歷過人際背叛事件後的認知歷程與後續症狀的關係。

本研究過程將會請您填寫一份問卷，所需時間約為四十五分鐘。

基於我們對於您個人權益的尊重，本研究對您有以下的承諾：

※您有權隨時停止作答，並且不會因此而受到懲罰。

※您有權要回您的資料，並且撤銷被納入分析。

※您有權在本研究結束後知道研究結果。

※如有任何疑問，您可隨時經由參與者聯中所附之聯絡方式與研究人員進行聯絡。

本研究之結果，僅供學術使用，將不做其他用途；本研究的資料沒有對錯或好壞的判斷，您的所有資料將被匿名保密，請您放心填答，謝謝您的合作！

如您同意參與本研究，請於簽上您的姓名與聯絡方式，謝謝您。

本人已詳細閱讀本同意書，並同意參與研究。

參與者簽名：\_\_\_\_\_ 聯絡方式：\_\_\_\_\_ 日期：\_\_\_\_年\_\_月\_\_日

參與者年齡未滿 20 歲者，請家長或監護人簽名。

參與者家長/監護人簽名：\_\_\_\_\_ 聯絡方式：\_\_\_\_\_ 日期：\_\_\_\_年\_\_月\_\_日

再次感謝您。

實驗/主試者：劉亭好

國立臺灣大學心理學研究所碩班研究生

聯絡地址：臺灣大學心理系南館 406 室

聯絡電話/手機：0928-791-868

指導老師：陳淑惠

國立臺灣大學心理學系教授

聯絡地址：臺灣大學心理系南館 405 室

聯絡電話/手機：02-33663100

研究者簽名：\_\_\_\_\_ 日期：\_\_\_\_年\_\_月\_\_日

## 參與研究同意書

國立臺灣大學心理學研究所



親愛的同學，您好：

本研究名稱為**經歷背叛之創傷後壓力症狀的風險因子與心理病理模式**。首先，感謝您參與本次的研究。此研究之主要目的在於瞭解你在經歷過人際背叛事件後的認知歷程與後續症狀的關係。

本研究過程將會請您填寫兩份問卷，分別為「前測」及「後測」，兩次測驗時間間隔為六週，「前測」所需時間約為四十五分鐘，「後測」所需時間約為十五分鐘，總共一個小時。

基於我們對於您個人權益的尊重，本研究對您有以下的承諾：

※您有權隨時停止作答，並且不會因此而受到懲罰。

※您有權要回您的資料，並且撤銷被納入分析。

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參與者年齡未滿 20 歲者，請家長或監護人簽名。

參與者家長/監護人簽名：\_\_\_\_\_ 聯絡方式：\_\_\_\_\_ 日期：\_\_\_\_年\_\_\_\_月\_\_\_\_日

再次感謝您。

實驗/主試者：劉亭妤

國立臺灣大學心理學研究所碩班研究生

聯絡地址：臺灣大學心理系南館 406 室

聯絡電話/手機：0928-791-868

指導老師：陳淑惠

國立臺灣大學心理學系教授

聯絡地址：臺灣大學心理系南館 405 室

聯絡電話/手機：02-33663100

研究者簽名：\_\_\_\_\_ 日期：\_\_\_\_年\_\_\_\_月\_\_\_\_日

## Appendix B

### 人際背叛問卷



請你回想，你是否曾在人際關係裡有過「**被背叛的經驗**」：這類經驗可包括：

- (1)你原本信任對方是你所想像的樣子，但是後來對方所做的行為或發生的事情，與你的想像不同；或
- (2)你原本相信這段關係應該是什麼樣子，但是對方所做的行為或發生的事情，違背了你對這段關係的信任；或
- (3)你一直信任對方會如何對待自己，但是對方所做的行為或發生的事情，違反了這個信任。

也就是說，對方「違反了關係中的規則與信任」。

(以往有人會寫下的事件，如：父母失信、父母虐待、父母遺棄、親人死亡、伴侶不貞、伴侶說謊、伴侶重視自己勝過我們的關係、朋友欺騙、朋友揭露我的重要秘密、朋友中傷、同學排擠、老師當眾羞辱、同事偷走我的點子並且居功.....)

現在，請你回想一個對你影響最深、衝擊最大的背叛經驗.....

★ 你原本期待這段關係的規則是什麼？

★ 後來對方做了什麼行為或發生了什麼，違反你對他/她的信任與期待？

★ 請你靜下心來回想此背叛經驗，花幾分鐘時間讓這個經驗重新浮現眼前，試著回想事發經過、對方當時的作為、你的想法和感受，並將此經驗寫下來。(可能有幫助的作法是：試試閉上你的眼睛，想像自己回到這個事件的情境中，引發自己產生和當時同樣的想法與感受。)



★ 事件中的對方，與你的關係是？(可複選)

- 1. 家人
- 2. 伴侶
- 3. 朋友
- 4. 師長
- 5. 其他: \_\_\_\_\_

★ 你所寫下的背叛事件是屬於以下何種性質？(可複選)

1. 請先在□內勾選符合的項目(可複選；若找不到適當分類，可選擇其它)
2. 接著針對勾選項目，依關聯性強度排序  
(例如：1 最接近、2 普通接近、3 有點接近……以此類推)

- \_\_\_ 1. 欺騙：講出和事實不一樣的事
- \_\_\_ 2. 失信：本來承諾好的事情，後來卻沒有做到
- \_\_\_ 3. 遺棄：毫無預警地離開或把我丟下
- \_\_\_ 4. 洩露或揭露我的秘密
- \_\_\_ 5. 無法預期的人際疏離
- \_\_\_ 6. 無法預期的言語中傷
- \_\_\_ 7. 無法預期的身體侵害
- \_\_\_ 8. 性侵害
- \_\_\_ 9. 偷走我的點子、作業、報告，或抄襲文章，並且居功
- \_\_\_ 10. 伴侶出軌，或和他人產生感情，或發生性行為
- \_\_\_ 11. 遭人陷害而背黑鍋
- \_\_\_ 12. 遭人排擠
- \_\_\_ 13. 遭人利用
- \_\_\_ 14. 在我背後說壞話
- \_\_\_ 15. 被重要的人瞧不起、偏心、不公平的對待
- \_\_\_ 16. 其他: \_\_\_\_\_

★ 這件事情發生在什麼時候？ \_\_\_\_\_

★ 距離現在大約\_\_\_年\_\_\_月？

## 關係信任與背叛評估

接著要請你根據所填寫的事件，回想在這個背叛事件發生之前，你對他的信任、對關係規則的信任，以及這件事如何破壞你的信任與規則。請勾選一個最適當的描述。

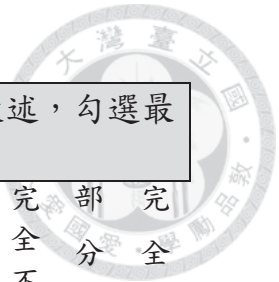
※ 請注意，每項問題都有兩個部分，需一起回答！

**第一部分**想知道，你原本所持有的信任或想法。

**第二部分**想知道，在這件事情上對方是否違反這個信任。

	完 全 不 符 合	有 點 符 合	中 等 符 合	非 常 符 合	完 全 符 合
1-1. 我原本信任他/她在關係中是誠實的	0	1	2	3	4
1-2. 而他/她在這件事情上是不誠實的	0	1	2	3	4
2-1. 我原本信任他/她在關係中會遵守承諾	0	1	2	3	4
2-2. 而他/她在這件事情上，沒有遵守承諾	0	1	2	3	4
3-1. 我原本信任他/她在關係中是真誠的	0	1	2	3	4
3-2. 而他/她在這件事情上是不真誠的	0	1	2	3	4
4-1. 我原本信任他/她在關係中會對我忠誠	0	1	2	3	4
4-2. 而他/她在這件事情上，對我不忠誠	0	1	2	3	4
5-1. 我原本信任他/她會保護我	0	1	2	3	4
5-2. 而他/她在這件事情上，沒有保護我	0	1	2	3	4
6-1. 我原本相信他/她會一直在	0	1	2	3	4
6-2. 而他/她沒有	0	1	2	3	4
7-1. 我原本信任他/她會在我需要時提供援助	0	1	2	3	4
7-2. 而他/她沒有在我需要時提供援助	0	1	2	3	4
8-1. 我原本相信他/她會重視我的感覺	0	1	2	3	4
8-2. 而他/她沒有重視我的感覺	0	1	2	3	4
9-1. 我原本相信他/她重視我們的關係	0	1	2	3	4
9-2. 而他/她沒有重視我們的關係	0	1	2	3	4
10-1. 我原本相信他不會傷害我	0	1	2	3	4
10-2. 而他/她卻傷害了我	0	1	2	3	4
11-1. 我原本相信他/她不會讓這件事情發生	0	1	2	3	4
11-2. 而他/她卻讓這件事情發生	0	1	2	3	4
12-1. 我原本相信我對他/她而言是獨特的	0	1	2	3	4
12-2. 結果我對他/她而言不是獨特的	0	1	2	3	4

## 關係親密程度問卷



這部分想瞭解當時你與他/她的關係。請針對每一題的敘述，勾選最符合你實際情況的選項。

	完 全 不 符 合	部 分 符 合	完 全 符 合
1. 過去我能從他/她那裡獲得情緒幫助和支持。	0	1	2
2. 過去我能向他/她述說自己的快樂與悲傷。	0	1	2
3. 過去當我有困難或需要時，他/她會協助我。	0	1	2
4. 過去當生活不順利時，我可以倚靠他/她。	0	1	2

## 背叛時負向情緒

請你回想在這事件發生當時是否出現下列反應？  
請圈選最能描述反應程度的數字。

	完 全 沒 有				非 常 強 烈
在事件發生當時...					
1. 我感到害怕。	0	1	2	3	4
2. 我感到無助。	0	1	2	3	4
3. 我感到生氣。	0	1	2	3	4
4. 我感到羞愧。	0	1	2	3	4
5. 我感到恐怖。	0	1	2	3	4
6. 我感到暴怒。	0	1	2	3	4
7. 我感到丟臉。	0	1	2	3	4
8. 我感到被羞辱。	0	1	2	3	4
9. 我感到憎恨。	0	1	2	3	4
10. 我感到無力。	0	1	2	3	4
11. 我感到嫉妒。	0	1	2	3	4
12. 我感到傷心。	0	1	2	3	4

## 不良的認知策略



當這背叛事件的記憶突然出現在你腦海時，你會做什麼？  
請你圈選在最近一週以來，最符合你情況的答案。

<u>最近一週以來，當事件記憶突然出現在你的腦海時...</u>	從 來 沒 有	有 時 候	經 常	總 是
1. 我思考如果這事件沒發生，生活可能有何不同。	0	1	2	3
2. 我老想著本來能怎樣防止這事件。	0	1	2	3
3. 我思考為何這事件發生在我身上。	0	1	2	3
4. 我老想著我在這事件前是怎樣子的。	0	1	2	3
5. 我老想著別人曾對我做的事。	0	1	2	3
6. 我老想著我本來應該有不同做法。	0	1	2	3
7. 我一再重溫事件的發生經過。	0	1	2	3
8. 我擔心類似的某事會發生在我或我的家人身上。	0	1	2	3



## 背叛後失功能認知量表



我們想瞭解你在經歷背叛事件後可能已經持有的想法。以下列出一些陳述句，它們可能可以代表你的想法，但也可能不一樣。請仔細閱讀每個句子，判斷你對這些句子的同意程度，圈選最能表示你同意程度的數字（1-7）。人們對創傷事件有很多不同的反應方式，這些句子也沒有對或錯的標準答案。

- 1 完全不同意    2 非常不同意    3 稍微不同意    4 中性無意見  
5 稍微同意      6 非常同意      7 完全同意

	完全 不同 意	非常 不同 意	稍 微 不 同 意	中 性 無 意 見	稍 微 同 意	非 常 同 意	完 全 同 意
1. 這個事件會發生是因為我的行事方式	1	2	3	4	5	6	7
2. 我無法信任自己能做出正確的事	1	2	3	4	5	6	7
3. 我是軟弱的人	1	2	3	4	5	6	7
4. 我將不能夠控制我的憤怒，而且會做出可怕的事	1	2	3	4	5	6	7
5. 即使最輕微的心煩意亂，我都不能處理	1	2	3	4	5	6	7
6. 以前我是個快樂的人，但現在我總是淒慘的	1	2	3	4	5	6	7
7. 人們是不能信任的	1	2	3	4	5	6	7
8. 我必須所有時刻處於防備	1	2	3	4	5	6	7
9. 我感覺內在死亡	1	2	3	4	5	6	7
10. 你永遠不知道誰會傷害你	1	2	3	4	5	6	7
11. 因為你永遠不知道下一刻會發生什麼，我必須格外小心	1	2	3	4	5	6	7
12. 我是沒有能力的	1	2	3	4	5	6	7
13. 如果我思考這個事件，我將不能處理它	1	2	3	4	5	6	7
14. 因為我是這樣的人，這個事件才發生在我的身上	1	2	3	4	5	6	7
15. 我在這個事件發生後的反應表示我快瘋了	1	2	3	4	5	6	7
16. 我再也不能感受正常的情緒	1	2	3	4	5	6	7
17. 這個世界是危險的地方	1	2	3	4	5	6	7
18. 其他人可以阻止這個事件的發生	1	2	3	4	5	6	7
19. 我已經永遠變得很糟糕了	1	2	3	4	5	6	7
20. 我感覺自己像個物體而不像個人	1	2	3	4	5	6	7





	完全不同意	非常不同意	稍微不同意	中性無意見	稍微同意	非常同意	完全同意
21. 其他人大概不會陷入這種處境	1	2	3	4	5	6	7
22. 我無法倚賴其他人	1	2	3	4	5	6	7
23. 我感覺孤立而且脫離其他人	1	2	3	4	5	6	7
24. 我沒有未來	1	2	3	4	5	6	7
25. 我無法阻止壞事發生在我身上	1	2	3	4	5	6	7
26. 人們並不是他們看起來那樣	1	2	3	4	5	6	7
27. 我的人生已經被這個創傷摧毀了	1	2	3	4	5	6	7
28. 就身為人來說，我有些不對勁的地方	1	2	3	4	5	6	7
29. 我在這個事件發生後的反應表示我是很糟的人	1	2	3	4	5	6	7
30. 有些和我有關的部分導致這個事件發生	1	2	3	4	5	6	7
31. 我感覺好像再也不認識我自己	1	2	3	4	5	6	7
32. 我無法倚賴我自己	1	2	3	4	5	6	7
33. 再也不會有任何好事發生在我身上	1	2	3	4	5	6	7

## 創傷後壓力診斷量表

以下請根據此**背叛事件**作答。請閱讀下列題目，回想最近一個月以來（若事件發生不滿一個月，則為發生至今時間）是否出現下列情形，圈選符合最近一個月以來（或事件發生至今），此情形困擾你的頻率的數字（0 至 3 分）。

### 最近一個月以來.....

		從 未 如 此	偶 而 如 此	一 半 時 間 如 此	幾 乎 總 是 如 此
0 從未如此或只出現一次					
1 偶而如此 / 一週一次或更少					
2 一半時間如此 / 一週兩次至四次					
3 幾乎總是如此 / 一週五次或更多					
<hr/>					
1. 和此創傷事件有關的難受念頭或影像，會在你不想要的時候跑進你的腦海中	0	1	2	3	
2. 出現和此創傷事件有關的惡夢或夢魘	0	1	2	3	
3. 感覺重新經歷創傷事件，表現出宛如此創傷事件再度發生的行為或感受	0	1	2	3	
4. 當你被喚起想到此創傷事件時，感到情緒難受（如感到懼怕、生氣、悲傷、罪惡等）	0	1	2	3	
5. 當你被喚起想到此創傷事件時，經驗到生理反應（如突然冒汗、心跳加快）	0	1	2	3	
<hr/>					
6. 試圖不去想起、談論、或感受此創傷事件	0	1	2	3	
7. 試圖迴避會提醒你想起此創傷事件的活動、人物、或地方	0	1	2	3	
8. 無法記得此創傷事件的重要部份	0	1	2	3	
9. 對重要活動明顯降低興趣或減少參加	0	1	2	3	
10. 感覺疏離或和周遭人隔絕	0	1	2	3	
<hr/>					
11. 感覺情感麻木（如無法哭泣或無法有愛的感受）	0	1	2	3	
12. 感覺宛如你的未來計畫或期望不會實現（如你將不會有職業、婚姻、小孩、或長壽）	0	1	2	3	
13. 很難入睡或保持睡著	0	1	2	3	
14. 感覺焦躁不安或突然發怒	0	1	2	3	
15. 很難集中注意力（如談話飄忽不定、忘記電視情節、忘記你讀過的東西）	0	1	2	3	
16. 過度警覺（如檢查誰在你身旁、你背對門時感到不自在等）	0	1	2	3	
17. 容易提心吊膽或驚嚇（如當某個人走近你後面）	0	1	2	3	

- ☞ 以上勾選的情形是否在最近一個月以來干擾你的生活？請勾選受干擾領域（可複選）
- 1 工作   
 2 家庭事務與責任   
 3 與朋友的關係   
 4 娛樂與休閒活動   
 5 學校課業  
6 與家人的關係   
7 性生活   
8 生活普遍滿意   
9 所有生活領域的整體功能水準  
0 完全未受干擾（以上都沒有勾選者，請勾此選項）