

# Pertinent Studies on Treatments for Prolonged Grief Disorder

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**Abstract.** Prolonged grief disorder (PGD) is a distinctive disorder and leads to severe impairments in people's life. Treatments specific to PGD are urgently needed. However, there have not been enough studies on this topic and universally effective treatments have not been validated. As a result, the current paper aims to summarize some studies about pertinent treatments and list what may be their shortcomings, in order to give future direction for investigation on treatment for PGD. Results show that study of pharmacology for PGD may just start. There has not been effective medicine yet. Complicated grief treatment can be an effective way to treat PGD, but its response rate can be better, if future studies can confirm its real working factors and examine the treatment in a larger and more diverse sample group. Cognitive behavioral therapy (CBT) targeted at CG shows promising outcomes. However, its response rate should also be improved in the future. Meanwhile, as different CBT plans always have different intervention procedure, it may be hard to figure out what really works on PGD and helps to improve. Future study can try to confirm its true therapeutic factors. In all, there is much work need to be done in the future.

**Keywords:** Prolonged grief disorder, pharmacology for PGD, complicated grief treatment, CBT.

## 1. Introduction

Many researches have proven that pathological grief does exist and people who meet the criteria for prolonged grief disorder (PGD) are experiencing severe pain and functional impairments, like yearning for the deceased, refusing to accept the death, impairments in relationship, sleep problems, substance abuse, suicidality, and so on [1]. Some researchers have tested the effectiveness of several treatments for PGD. Results show that grief-targeted therapy may be somehow helpful, while other treatments that used to treat other kinds of mental disorder may not significantly improve symptoms for PGD [2]. These all urge to find and develop treatments that could greatly improve PGD on a large scale, and prevention strategies are also needed [3]. The current article will do a general overview on present states of treatment for PGD. This study will list studies about different kinds of treatment, make brief summaries of them, present their limitations and tries to give future direction on investigation.

## 2. Definition

### 2.1. Definition and symptoms of PGD

Both ICD-11 and DSM-5-TR require a person to experience bereavement and significant impairment in different important areas of functioning before one is going to be diagnosed with PGD [4,5]. The ICD-11 puts emphasis on the pain of separation experienced by people with PGD. It asks for a grief response that is pervasive and persistent and filled with yearning for the deceased. People with PGD will also be overwhelmed by strong emotional pain, like sadness, guilt, anger, refusing to accept the death and so on. The symptoms should last more than six months, and the lasting time is not in line with the social norms and cultural tradition of individuals with PGD.

As for DSM-5-TR, individual who might be diagnosed as PGD should present at least three of the symptoms below: disturbance of identity (such as feeling like some part of oneself has died), significant disbelief on the reality of death, avoiding to be reminded of the deceased, strong emotional pain, strong loneliness, feeling difficult to reintegrate (like having difficulty in participating activities

once found interested), emotional numbness, feeling life meaningless. Symptoms should last one year for adults and six months for children and adolescents, and occur nearly every day for at least one month right before the diagnosis. In both criteria, children may exhibit irritability, protest behavior or conduct problems to express their anger and sadness for loss.

## 2.2. Hypothesis of neural mechanism

There have not been an exact and acknowledged neural mechanism of PGD now, due to the limitation of quantity of pertinent researches. However, there are still some discoveries. For example, in a study using fMRI, when people with PGD, MDD, PTSD, and those who were grieving normally saw sad, cheerful, or neutral faces, both supraliminal and subliminal levels of their brain activity were recorded [6]. Results indicate that while displaying cheerful faces subliminally, the pregenual anterior cingulate cortex, right caudate nuclei, bilateral insula, and bilateral dorsolateral prefrontal cortices of people with PGD activate more than those of control group [6]. As a result, according to some researchers, PGD may have a reward system etiology because these regions are also involved in substance addiction, which is caused by the dysregulation of the brain reward system [7].

## 3. Treatment

### 3.1. Pharmacology

There have not been medicines invented specific to PGD. Most of the studies worked on pharmacology are testing whether medicines for MDD can also be effective on improving symptoms of PGD. For example, in one study, researchers used randomized clinical trial (RCT) to test whether citalopram (CIT) is effective to treat complicated grief (CG), and to test how effective will CIT be with and without complicated grief psychotherapy [8]. 395 bereaved adults (78.0% female and 82.3% white) meeting the criteria for CG were randomly assigned into four groups: CIT, placebo, complicated grief treatment (CGT) with CIT, and CGT with placebo. Results show that while CGT greatly improved CIT the outcome, CIT almost had the same effect as placebo at week 12 on the efficacy of improving CG and did not improve the outcome of CGT [8].

The study also had some limitations. First, the maximal dose of CIT was restricted from 60 mg to 40 mg by US Food and Drug Administration guidelines, which might have lowered participants' response to CIT [8]. Second, the drop rate was very high, which might have influence on the outcome. Moreover, most of the participants were well-educated white females, so the result might not have a broad applicability.

In all, as the official criteria of PGD have just been defined, researches in the past may not be able to give effective information to future investigation due to the incomplete understanding of PGD. For example, in one study, researchers investigated whether bereavement in DSM-IV would respond to bupropion sustained (SR) release by treated 22 participants who had lost their wives or husbands 6 to 8 weeks before the study with bupropion SR [9]. Although researchers used Inventory of Complicated Grief (ICG) to assess participants CG and results presented the improvement in grief intensity, it may not be convincing to say that CG can be treated, as the time after loss was less than six months. What's more, the sample size of past studies were also very small, such as N=15 [10]. Although in these studies, participants show improvement in both CG and major depressive disorder (MDD) [10], the effect may not be significant in large size. Another limitation of pertinent researches is that most of the subjects are white female who are well-educated. This may restrain the effect of study outcomes to a certain group of people, making it hard to generalize. Moreover, most studies just divide subjects into different groups by gender, type of bereavement, the severity of MDD and CG, which may neglect the effectiveness of medicine to some special groups, like those people who have certain patterns of behavior, since everyone tends to grieve in one's own way.

The investigation on pharmacology for PGD is just getting started. With the setting of official definition and criteria, people with PGD can be diagnosed and treated specifically on symptoms of

PGD. Meanwhile, the formalization of criteria will help researchers to get approval to carry out investigation on targeted pharmacotherapy interventions, broadening the evidence pharmacology for PGD [11].

### 3.2. Complicated grief treatment (CGT)

Complicated grief treatment is a newly developed treatment for CG which is supported by evidence [12]. It regards grief as a very natural thing after a loss and helps people to find a place in their lives to facilitate adaptation to the loss [12]. According to dual-process model of bereavement, during the adaptation to loss, people need to deal with both loss-oriented stressors (e.g., grief work, denying restoration changes, “relocate” the deceased in a world without themselves) and restoration-oriented stressors (e.g., change one’s role, learn new skills) [13]. There should be an oscillation between the loss and restoration components [13]. Focusing exclusively on either orientation or being stuck into either one will lead to psychologically and physiologically exhausting [13], and thus finally turn into PGD. CGT works on seven themes to help people to deal with these two stressors and accomplish their goals in an adaptive process: understanding and embracing loss, coping with emotional anguish, planning for the future, enhancing current connections, sharing the deceased's story, enduring reminders, and connecting to memories [12].

In one study using randomized clinical trial, 151 elderly people (86.1% white, 81.5% female) were assigned to group treated by CGT (n=74) or group treated by interpersonal psychotherapy (IPT) which was grief-focused (n=77) [14]. Researchers used the rate of treatment response at 20 weeks after baseline as the measurement for main result. 81.9% participants in CGT and 80.8% participants in IPT completed treatment. Results shew that although both treatments improved symptoms for CG, the response rate in CGT group (70.5%) was beyond double than that in IPT group (32.0%), which means a significant difference between them ( $p<.001$ ) [14]. Secondary analyses included symptom severity and impairment measures [14]. The outcome suggested that CGT made a greater improvement in CG symptom than IPT, as 35.2% individuals in CGT group and 64.1% ones in IPT group were still moderately unwell or more severe than that [14].

There are still some limitations in the study. Besides the dominance of high socioeconomic status white female among participants, which may make the outcome hard to be generalized to other kinds of group [14] the result actually is not so optimistic. The response rate in CGT group was not so high and there were still one-third of participants undergoing at least moderately severe symptoms, so maybe CGT can be helpful to some people of certain kinds, but has nothing to do with other people who may have completely different grieving process.

Another study using RCT has tested the effectiveness of CGT in group therapy [15]. Researchers compared the effectiveness group therapy that applied CGT (CGGT) and formal group therapy for two times [15]. In the first time, eleven participants were assigned to the CGGT group and eleven participants were designated to the grief support group using formal group therapy, while in the second time, nine were assigned to CGGT and eight were assigned to the condition group. All participants were elderly white people, dominated by female. Results shew that participants in CGGT groups had higher treatment response and presented better improvements than condition groups [15]. Almost half of the participants in CGGT group shew clinically significant improvement, measured by Prolonged Grief Disorder Scale.

The study may propose the possibility to effectively treat PGD by CGT in the form of group therapy. Nevertheless, it is very likely that the outcome cannot be replicated in large subject size, since researchers only did two comparisons among four groups and the response rate in CGGT was even under 50%. What’s more, the form of group therapy itself involves many variables that may influence the outcome and are hard to control, such as participants willingness to learn from each other and members religion components [16]. Also, there are many therapeutic factors in group therapy, like the mere social support, interpersonal learning and attachment, process of meaning-taking [16]. It is not clearly that whether CGT itself has done much help, or actually the improvement was elicited by other therapeutic factors or the interactions between CGT and other factors.

In all, CGT is a promising therapy that targets at PGD. More studies need to be done to confirm its real effective factors, underlying mechanisms, and find ways to enlarge its response rate among patients. Whether there is mediation or/and moderation effect also need to be tested in the future.

### 3.3. Cognitive behavioral therapy (CBT)

According to cognitive-behavioral conceptualization of CG, people will develop and maintain CG through these three crucial processes: First, the incorporation of the loss into the base of autobiographical knowledge is insufficient [17]. Secondly, people have unfavorable general views and misinterpretations on grief reactions [17]. Thirdly, they may apply anxious and depressive avoidance tactics [17]. The model also recognizes that adult attachment style will influence CG, which means that people with insecure attachment will put more endeavor to adjust, but this influence may be mediated by the main processes [17]. As a result, the main purpose of CBT is to help people to challenge negative and harmful cognition, and to integrate the loss into autobiographical memory in an adaptive and meaningful way.

An earlier study has tested the effect of CBT and on adults [18]. 54 participants (74.1% women) with significant CG were randomly allocated to three conditions: a group first treated by cognitive restructuring (CR) and then treated by exposure therapy (ET), a group first treated by ET and then treated by CR, and a group treated by supportive counselling (SC). Main assessments were intake interview according to the Traumatic Grief Evaluation of Response to Loss, and self-report measures (e.g., SCL-90, TRIG, ICG, etc.). Among all conditions, participants under CBT conditions presented greater improvement than participants in SC when analyzing by ICG [18]. Meanwhile, the ET - CR condition was the most effective and the reversed group was also more effective than SC when comparing the assessment of SCL-90 [18].

However, the result may not be precise enough. First, most of the participants were white female with relatively high SES and the number of participants was too small [18], which may make it hard to replicate the result in future study with diverse subjects and large size. Second, the main assessments were dominated by self-report and there was no standardized process to exclude people with comorbidity [18], so it is hard to guarantee that participants were really becoming better and the comorbidity would not influence treatment effect. Third, the dropout rate was high and participants who were beneficial from treatment were less than half [18]. More studies need to be done to confirm the effectiveness of such treatment.

Another study has used integrative CBT for intervention [19]. Fifty-one participants were included in this study. They were allocated to CBT group (n=24) or wait list (n=27) randomly. Under the intervention condition, participants had experienced a treatment included three themes: stabilize and motivate patients when further exploring patients' grief state; teach relaxation techniques when perceiving cognitions about patient themselves and their loss; build prospects for the future while preserving an adaptive connection to the departed [19]. Intervention has integrated with other kinds of therapies, like expressive art therapy and exposure therapy [19]. Outcome presented that improvements in both grief symptom severity and depressive symptoms in comorbidity were significant [19]. Also, the study found out that 64% participants who completed therapy and could be reached 1.5 years post-treatment had achieved clinically relevant improvement in the end [19].

The study still had some limitations [19]. The first is the small sample size [19]. Secondly, the study did not follow strict RCT after offering all the treatment, so the long-term effects may be influenced by other variables [19].

One study has tested effectiveness of CBT on children and adolescents who have PGD [20]. In this study, 134 children and adolescents with PGD were randomly assigned to group applied CBT (N=74) or group applied SC (N=60). Children and juveniles were measured by PGD, depression, and PTSD, and caretakers reported children's problem behavior at five time point, including 12 months after treatment. Researchers found that both CBT and SC presented at least moderate effect sizes across PGD [20]. In addition, CBT made significantly greater improvement in symptoms of

PGD [20]. Researchers also found moderation effect of age, as older children gained more benefits from CBT than younger ones compared to SC [20].

Because the study has added counseling for parents, it is not sure that how much parent counseling and parent characteristics have influenced the outcome [20]. Besides, the drop rate in SC is four times than CBT [20]. This may influence the effect of SC and amplify the real effect of CBT.

Overall, CBT shows effective outcomes. However, more studies should be done to evaluate and confirm its long-term effectiveness in larger subject size and diverse participants. Moreover, different studies in CBT applied different intervention procedure. This may make it difficult to compare the effectiveness between them to find the most helpful and important factors.

## **4. Discussion and Suggestion**

### **4.1. General outcomes**

In all, pharmacology for PGD may have not made huge progress yet. While CGT and CBT have confirmed to be partly useful, the effectiveness of them now has not been large enough to make them generally helpful. Further studies are needed to confirm their therapeutic factors and find ways to enlarge their effectiveness. Other treatments that might treat PGD in a more generalized way also need to be invented and tested.

### **4.2. Limitations on treatment investigation**

The consistent limitation is the relatively small subjective size and homogeneous participants, making the results of studies hard to be validated in a larger and more diverse community. In addition, pertinent studies might lack structure between one and another, as researches just scatter on the field of treatment for PGD, independent from each other. Comparisons should be made within studies and between studies to figure out what really works for people with PGD, and how their deceased reasons, internal factors and external factors may influence the outcome of treatment. Mediators and moderators need to be analyzed to find how improvement happens and to whom treatments may work [21]. Long-term effect of different treatments also need to be tested.

### **4.3. Suggestion**

To researchers, more studies applied RCT and with large sample size should be carried out in the future to validate therapeutic factors and the influence of interaction between these factors and people's personal situation. Moreover, with the development of internet, life pace is getting more rapid, and the effectiveness of treatments by online remote ways also need to be examined.

To therapists, as people all grieve in their unique way due to their different deceased reasons, and diverse internal and external factors [3], attention should be paid to patients' own performance and attitude towards all these things.

To communities, monitoring and intervention service system for PGD should be set up, in order to offer help as soon as possible and carry out psychological education about grief and PGD. To people themselves, they need to remember to keep self-awareness and ask for help if it is needed.

## **5. Conclusion**

The set up of PGD can help people who suffer from pathological grief to get direct and effective help. Recent studies on the hypothesis of neural mechanism for PGD have made some consistent discoveries and in the future the mechanism may be confirmed. For treatment, there have not been effective medicines targeted at PGD yet. The set up of PGD helps to carry out more scientific investigations regarding the disorder. Further study towards the neural mechanism of PGD may also promote inventory of medicines. CGT and CBT targeted at pathological grief shows some effectiveness. However, their clinical response rate can be better. Future studies may investigate the working mechanism of these two treatments, combining with the uniqueness of grief of different

people, to enlarge and generalize their effectiveness, or build up new treatments containing factors that contribute to improvements. Before creating an organized PGD treatment strategy, there is still much work waiting to be done.

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