

Individually tailored Internet-delivered cognitive-behavioral therapy for survivors of intimate partner violence: A randomized controlled pilot trial

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ABSTRACT

Intimate partner violence (IPV) is a serious public health concern worldwide and defined as behavior performed by spouses or other intimate partners that causes physical, sexual, or psychological harm. Internet-delivered cognitive-behavioral therapy (ICBT) may be particularly useful for survivors of IPV for several reasons, including barriers pertaining to limited community recourses and treatment availability, safety concerns, and issues of stigma, guilt and shame, which may prevent members of this population from seeking help via face-to-face interactions. However, Internet interventions are lacking. The primary aim of the present randomized controlled pilot trial was to explore the feasibility of ICBT as guided self-help individually tailored to the predominant symptomatology of PTSD or depression in survivors of IPV. A second aim was to conduct a preliminary evaluation exploring the short- and long-term effects of the treatment in comparison to a waitlist control condition. Results showed that the treatment was feasible. Attrition rate was low (9.4%), and participants were satisfied with treatment. However, treatment adherence was moderate in terms of completed modules (62.5%). Results of the preliminary evaluation of treatment effects showed large and statistically significant between-group effect sizes (Cohen's $d = 0.86$ – 1.08) on some measures of PTSD and depression at post assessment, favoring the treatment condition. However, there were no effects on other measures. At follow-up assessment, when the control condition had received delayed treatment, there were large and statistically significant within-group effect sizes ($d = 0.96$ – 1.48) on measures of PTSD, depression and anxiety, and small effects ($d = 0.48$) on a measure of quality of life. The results of the present pilot study are promising and warrant further research on ICBT for this population.

1. Introduction

Intimate partner violence (IPV) is a serious public health concern worldwide. The World Health Organization (WHO, 2013a) defines IPV as behavior performed by current and former spouses or other intimate partners that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and controlling behaviors. Similarly, the Centers for Disease Control and Prevention in the US (2019) describe four types of IPV: physical violence, sexual violence (including non-physical sexual acts such as

sexting), stalking, and psychological aggression (verbal and non-verbal communication with the intent to harm and/or exert control). IPV affects both females and males but is more prevalent among females. The global lifetime prevalence of physical and/or sexual violence by an intimate partner is estimated to 30% of females, with averages ranging from 23% in high-income regions to 37% in low- to middle-income regions (WHO, 2013a). In Sweden, the lifetime prevalence is estimated to 28% of females (European Union Agency for Fundamental Rights, 2014). This figure is above the average of 22% in the European union member states, which may be explained by socio-cultural and other

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factors related to high gender equality in Sweden, resulting in higher rates of disclosure of violent experiences (the “Nordic paradox”; [Humbert et al., 2021](#)). There are indications of an increased prevalence of IPV during the Covid 19-pandemic due to stay-at-home policies (e.g., [Aguero, 2021](#); [Gosangi et al., 2021](#)). Females experience greater IPV-related impact, including injury, fear, concern for safety, and needing services (e.g., [Smith et al., 2017](#)). For example, worldwide, 42% of females have experienced injuries as a result of IPV and 38% of all murdered females since 1982 were killed by an intimate partner ([WHO, 2013a](#)).

Survivors of IPV may experience a host of negative psychological and physical health effects, including posttraumatic stress disorder (PTSD), depression, anxiety, chronic pain, gynecological problems, and sexually transmitted infections ([Dillon et al., 2013](#)), with PTSD and depression constituting the most common mental health problems ([Campbell, 2002](#)). Female survivors of IPV, as compared to females who have not experienced IPV, are 16% more likely to have a child with low birth weight, twice as likely to have an abortion, and almost twice as likely to experience depression and alcohol use disorders ([WHO, 2013a](#)). Traumatic stress has been proposed to be the main mechanism that explains the association of IPV with several of these health effects ([WHO, 2013b](#)). The association between mental health problems and IPV victimization is bidirectional: IPV increases the risk of mental health problems, which themselves increase vulnerability to IPV ([Devries et al., 2013](#); [Keynejad et al., 2020](#)).

The needs of survivors of IPV are complex and manifold, including safety, medical care, housing services, legal services, parenting, economic challenges, and complex grief while making or considering significant life changes such as staying or leaving a relationship ([Arroyo et al., 2017](#); [D’Inverno et al., 2019](#)). Psychological treatments typically focus on the psychological sequelae of IPV, particularly PTSD and depression. Encouragingly, psychological treatments are effective in treating mental health problems in survivors of IPV. A systematic review and meta-analysis of 21 studies ([Arroyo et al., 2017](#)) found overall large effect sizes across studies and outcomes, with large effects for PTSD, depression, general distress (e.g., anxiety, guilt), life functioning (e.g., quality of life, social adjustment), and self-esteem. Moderate effects were found for substance use/abuse, emotional well-being (e.g., empowerment, readiness for change), safety, and recurrence of IPV. The effects were strongest in studies in which a control group was used against the intervention being studied (as compared to pre-post only). Cognitive-behavioral therapy (CBT) specifically tailored for survivors of IPV (i.e., using a trauma-informed approach) was the most effective treatment type. Furthermore, individual treatment was better than group treatment, and treatment effects did not differ if services were delivered in a shelter or in the community. Another recent systematic review and meta-analysis of 12 randomized controlled trials (RCTs) comparing females in low-income and middle-income countries who did and who did not report IPV ([Keynejad et al., 2020](#)) found, contrary to predictions, that anxiety showed a greater response to non-IPV-tailored psychological treatment among females who had experienced IPV than among those who had not. No differences in response between conditions were found on measures of PTSD, depression, and psychological distress. The authors concluded that psychological treatments are effective in treating mental health problems in female survivors of IPV, even when not tailored for this population or targeting IPV directly, but that trauma-focused interventions might yield even greater gains than generic interventions ([Keynejad et al., 2020](#)).

Internet-delivered interventions may be particularly useful for this population for several reasons, including barriers pertaining to limited community recourses and treatment availability, geographical constraints, partner surveillance, safety concerns, and issues of stigma, humiliation, guilt and shame, which may prevent survivors of IPV from seeking help via face-to-face interactions ([Rempel et al., 2019](#)). The suitability is even more pronounced when considering that the prevalence of IPV is higher in low-income and middle-income countries than

in high-income countries ([WHO, 2013a](#)). However, Internet-based interventions are lacking, for example, none of the above-mentioned systematic reviews and meta-analyses of psychological treatments for IPV ([Arroyo et al., 2017](#); [Keynejad et al., 2020](#)) included any such intervention. A recent review of 11 studies of Internet interventions for IPV ([Rempel et al., 2019](#)) found that they focused mainly on personal safety planning (e.g., using a safety decision aid) in the context of leaving or staying in an abusive relationship; only one study investigated the effects of Internet-delivered psychological treatment. [Hassija and Gray \(2011\)](#) studied the effects of CBT provided via videoconferencing-based technology in a small and uncontrolled sample of female survivors of IPV (80% of the sample) or sexual assault. From pre to post assessment, symptoms of PTSD and depression were improved by large effect sizes and participants reported high levels of satisfaction with videoconferencing-based treatment delivery. To our knowledge, no RCTs of Internet-delivered psychological treatments for survivors of IPV have been published to date.

The primary aim of the present randomized controlled pilot trial was to explore the feasibility of Internet-delivered CBT (ICBT) individually tailored to the predominant symptomatology of PTSD or depression in survivors of IPV. A second aim was to conduct a preliminary evaluation exploring the short- and long-term effects of the treatment in comparison to a waitlist control condition. Based on meta-analyses of ICBT for depression and anxiety disorders ([Andersson et al., 2019](#)), it was hypothesized that treatment would be feasible and produce effects similar to face-to-face CBT for survivors of IPV ([Arroyo et al., 2017](#)).

2. Material and methods

2.1. Design

The present pilot study compared ICBT to a waitlist control condition using a 1:1 randomized controlled design. Participants were randomized using an online true random number service (www.random.org) by an independent person who was not otherwise involved in the study. The treatment was delivered during an 8-week period and participants were measured at pre and post assessment. In addition, participants in the treatment condition were assessed 40 weeks following treatment completion, and participants in the control condition who received delayed treatment were assessed 32 weeks following their treatment completion. The present study was approved by the regional ethical review board in Linköping, Sweden (2012/403-31).

2.2. Participants and procedure

Participants were recruited via advertisements in national and regional newspapers and regional television broadcasts in 2012. Information about the study was also published on the website of Linköping University, and on a website for recruitment of potential participants to studies of Internet-delivered psychological treatments. Individuals interested in participating in the study were referred to the study website where information was provided about IPV, ICBT, criteria for participation, study procedures, and issues of confidentiality and safety.

Inclusion criteria were: (a) 18 years of age or older, (b) Prior experience of IPV victimization, (c) Current at least moderate mental health problems as assessed by self-report measures and in an interview, (c) Be able to write and read Swedish, and (d) Access to a computer with Internet connection. Exclusion criteria were: (a) Ongoing experience or current risk of IPV victimization, (b) Current substance abuse as assessed by self-report measures and in an interview, (c) Current mental health problems which required other treatment or acute management, and (d) Ongoing psychological treatment.

A total of 106 individuals registered on the study website and were then referred further to a treatment website hosted by the Internet Psychiatry Clinic, Stockholm Health Care Services, Stockholm, Sweden. Once logged in they provided written informed consent and completed a

screening measure of previous and current risk of violence exposure as well as a set of outcome measures. A total of 86 individuals completed pre assessment. Thereafter, individuals underwent a telephone interview to screen for psychiatric diagnoses, current risk of IPV, and study eligibility. Interviews were conducted by master level clinical psychology students and was completed by 78 individuals. Team conferences were then held during which cases were discussed and final decision about inclusion was made. Following the interview, 12 individuals did not meet the inclusion criteria. Of these, five were excluded due to ongoing relationship with an abusive partner or other violent relationship than IPV. These persons were contacted by telephone and recommended to seek shelter or the police. No participant was excluded because of an acute risk of suicide. Two additional individuals were excluded and offered treatment outside of the study; one individual met inclusion criteria but could not do the interview prior to randomization,

and the other individual already received treatment for mental health problems. Thus, 64 individuals were randomly allocated to tailored ICBT ($n = 32$) or a waitlist control condition ($n = 32$). See Fig. 1 for participant flow through the study, including reasons for exclusion. Participants were 63 females and one male, the mean age was 42 years (range = 23–72), and a majority (60.9%) had studied at university. Of the sample, 36 (57.1%) participants met diagnostic criteria for PTSD and 31 (49.2%) for depression at pre assessment. For additional participant characteristics, see Table 1. In the treatment condition, 20 (62.5%) participants followed the PTSD treatment track and 11 (34.4%) participants the depression track (see below), while one participant dropped out before being allocated to treatment track. Participants allocated to the control condition could contact the study staff if needed.

Therapists were four master level clinical psychology students in their final fifth year who had undergone training in CBT and completed

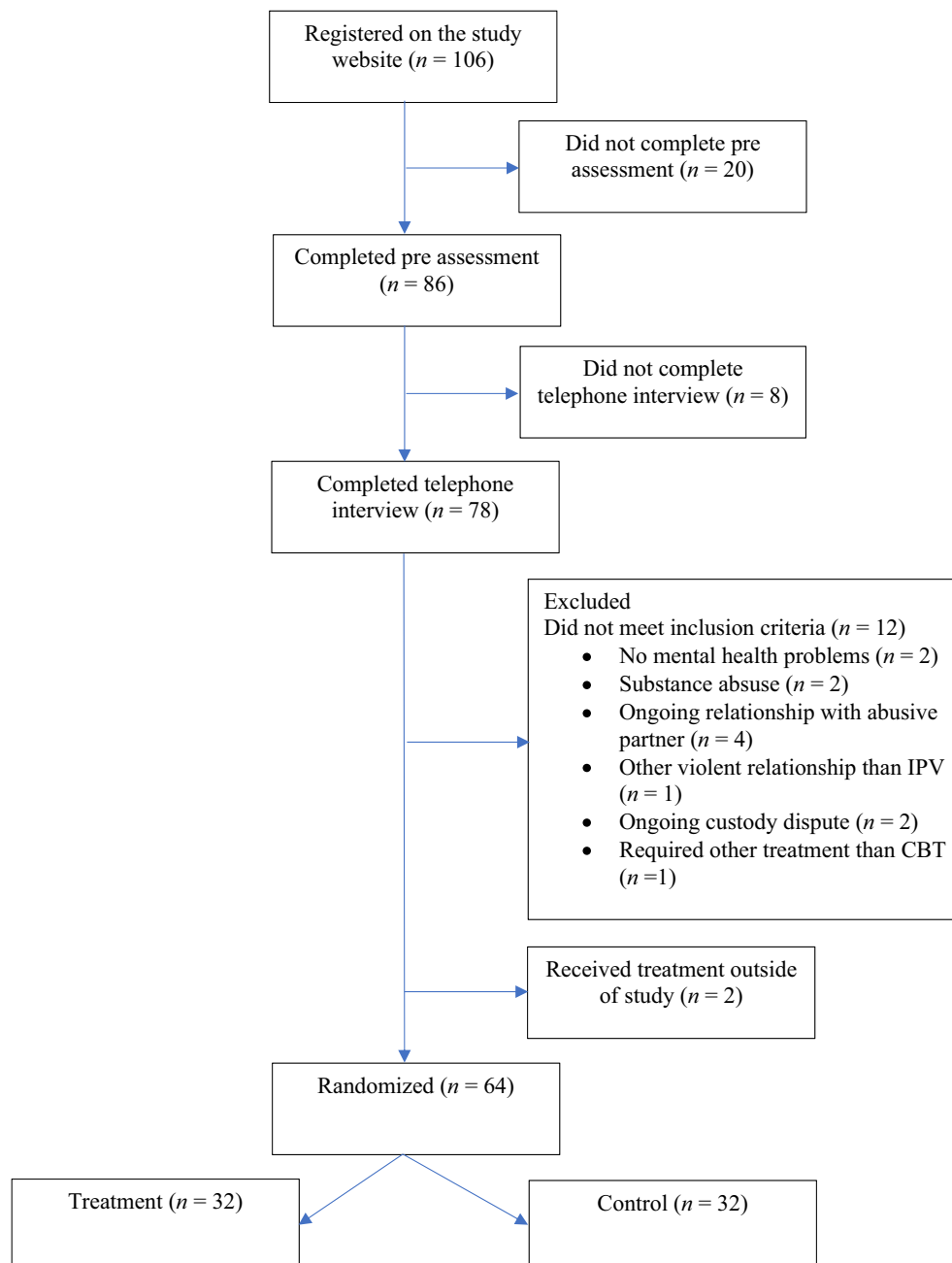


Fig. 1. Participant flow through the study.

Note. IPV = intimate partner violence, CBT = cognitive-behavioral therapy.

Table 1
Participant characteristics at pre assessment.

	Treatment (n = 32) n (%)	Waitlist control (n = 32) n (%)	Total (n = 64) n (%)
Gender			
Female	31	32	63
Male	1	0	1
Age			
M (SD)	43.03 (9.13)	41.44 (12.56)	42.23 (10.92)
Range	23–58	23–72	23–72
Education			
Primary	2 (6.3)	2 (6.3)	4 (6.3)
Secondary	6 (18.8)	6 (18.8)	12 (18.8)
Post-secondary	5 (15.6)	4 (12.5)	9 (14.1)
University	19 (59.4)	20 (62.5)	39 (60.9)
Civil status			
Married/registered partner/ domestic partner/partners living apart	16 (50.0)	12 (37.5)	28 (43.8)
Divorced/widow/widower	4 (12.5)	3 (9.4)	7 (10.9)
Single	12 (37.5)	17 (53.1)	29 (45.3)
Number of children			
M (SD)	1.59 (1.21)	1.50 (1.41)	1.55 (1.31)
Range	0–4	0–4	0–4
Employment			
Working/studying	25 (78.1)	26 (81.3)	51 (79.7)
Parental leave	1 (3.1)	0	1 (1.6)
Sick leave/disability pension	3 (9.4)	3 (9.4)	6 (9.4)
Unemployed	3 (9.4)	2 (6.3)	5 (7.8)
Pensioner	0	1 (3.1)	1 (1.6)
Employment rate			
100%	17 (53.1)	21 (65.6)	38 (59.4)
75%	4 (12.5)	4 (12.5)	8 (12.5)
50%	2 (6.3)	1 (3.1)	3 (4.7)
25%	2 (6.3)	1 (3.1)	3 (4.7)
0%	7 (21.9)	5 (15.6)	12 (18.8)
Financial situation			
Very good	1 (3.1)	1 (3.1)	2 (3.1)
Good	10 (31.3)	6 (18.8)	16 (25.0)
Neither good nor bad	6 (18.8)	15 (46.9)	21 (32.8)
Bad	9 (28.1)	5 (15.6)	14 (21.9)
Very bad	6 (18.8)	5 (15.6)	11 (17.2)
General health			
Very good	0	0	0
Good	7 (21.9)	5 (15.6)	12 (18.8)
Neither good nor bad	12 (37.5)	17 (53.1)	29 (45.3)
Bad	11 (34.4)	7 (21.9)	18 (28.1)
Very bad	2 (6.3)	3 (9.4)	5 (7.8)
Type of IPV			
Physical	32 (100)	31 (96.9)	63 (98.4)
Sexual	22 (68.8)	23 (74.2)	45 (71.4)
Psychological	32 (100)	32 (100)	63 (98.4)
Two types of IPV	32 (100)	32 (100)	64 (100)
Three types of IPV	22 (68.8)	22 (68.8)	44 (68.8)
Time since IPV, less than five years	17 (53.1)	19 (59.4)	36 (56.3)
Psychiatric diagnosis ^a			
Posttraumatic stress disorder	21 (65.6)	15 (48.4)	36 (57.1)
Depression	18 (56.3)	13 (41.9)	31 (49.2)
Social anxiety disorder	8 (25.0)	8 (25.8)	16 (25.4)
Panic disorder with agoraphobia	6 (18.8)	5 (16.1)	11 (17.5)
Panic disorder without agoraphobia	1 (3.1)	1 (3.2)	2 (3.2)
Agoraphobia	5 (15.6)	1 (3.2)	6 (9.5)
Generalized anxiety disorder	5 (15.6)	2 (6.5)	7 (11.1)
More than one diagnosis	29 (90.6)	18 (56.3)	47 (73.4)
No diagnosis	3 (9.4)	9 (28.1)	12 (18.8)

Table 1 (continued)

	Treatment (n = 32) n (%)	Waitlist control (n = 32) n (%)	Total (n = 64) n (%)
Previous psychological treatment	23 (71.9)	21 (65.6)	44 (68.8)
Psychopharmacological treatment			
Current treatment	8 (25.0)	8 (25.0)	16 (25.0)
Previous treatment	11 (34.4)	7 (21.9)	18 (28.1)
Computer literacy			
Very good	18 (56.3)	19 (59.4)	37 (57.8)
Quite good	6 (18.8)	8 (25.0)	14 (21.9)
Average	8 (25.0)	3 (9.4)	11 (17.2)
Quite bad	0	2 (6.3)	2 (3.1)
Very bad	0	0	0

Note. IPV = intimate partner violence.

^a Missing: waitlist control condition, n = 1.

clinical supervision. The main task of therapists was to provide feedback on homework assignments, but also feedback aimed at ensuring that participants had understood treatment content and encouraging treatment progress (Andersson, 2014). Feedback also consisted of validating difficulties which participants experienced in performing exercises and motivating for continued work with treatment content. Each therapist treated 16 participants, eight in the treatment condition and eight in the control condition, who received delayed treatment following post assessment. For treatment integrity purposes, therapists received supervision biweekly by a licensed clinical psychologist with experience of both face-to-face CBT and ICBT.

To monitor the current risk of IPV during treatment participants were requested to respond once a week to questions on the treatment website about exposure to threats or violence during the last week. Affirmative responses were followed-up and appropriate measures taken. Participants were assessed using Swedish versions of a diagnostic interview, clinician-assessed general improvement, and self-report measures at pre, post, and follow-up assessments. The diagnostic interview at post and follow-up assessments was conducted with a different therapist than the one who guided the treatment. Participants in the control condition received the same treatment as participants in the treatment condition following post assessment.

2.3. Treatment

ICBT was based on principles of CBT and delivered as guided self-help via the Internet during an 8-week treatment period. ICBT was individually tailored to the predominant symptomatology of the participants; that is, symptoms of PTSD or depression. Predominant symptomatology was decided on based on a diagnostic interview and self-report measures (see below). Treatment consisted of eight text-based modules including homework assignments. Modules were administered weekly by therapists through a treatment website. Module texts were of 21.4 normal size pages in length on average, ranging from 11 and 39 pages. Treatment content was consistent with evidence-based approaches to PTSD and depression (e.g., Foa et al., 2007; Martell et al., 2010). Some of the modules were based on treatment modules used in our previous studies of ICBT for PTSD (Ivarsson et al., 2014) and depression (Johansson et al., 2012), whereas other modules were developed for the present study. Treatment started with three modules which were common to all participants. The first module consisted of psychoeducation about IPV, mental health problems associated with IPV, and an introduction to ICBT. The second module focused on negative cognitions and their role in the etiology and maintenance of mental health problems. The third module introduced exposure treatment. Participants likely to benefit from treatment tailored to PTSD symptoms were also provided with material about relaxation skills. Following the third module participants continued in their respective

treatment track focusing on symptoms of PTSD or depression. Thus, modules four through eight in the PTSD track focused on psychoeducation about trauma and its effects, models of the development and maintenance of PTSD, exposure treatment, and cognitive restructuring. Similarly, modules four through eight in the depression track focused on psychoeducation about depression and its effects, models of the development and maintenance of depression, behavioral activation, and cognitive restructuring. Module eight in both tracks consisted of treatment summary and formulation of a maintenance plan. A ninth module was administered following treatment completion, focusing on strategies to avoid setbacks and relapse, and general information on the importance of physical activity and sleep for wellbeing. Within each treatment track participants were provided with the opportunity to access additional modules depending on their secondary symptoms. These modules focused on social anxiety, panic, agoraphobia, depression, and insomnia. See Table 2 for an overview of the treatment.

Participants worked with a module in their treatment track (and any supplementary module simultaneously) for a week and completed homework assignments, which consisted of responding to questions about treatment content, keeping a diary of cognitions and behaviors, and performing practical exercises in everyday life. Examples of exercises were managing negative cognitions, using behavioral activation, and conducting exposure. Upon finishing homework assignments participants were given access to the next module. However, by the end of the eighth week not all participants had received access to all modules because they had not finished the homework assignments of the preceding modules. These participants were given access to the remaining modules following post assessment to work with on their own.

2.4. Assessment

2.4.1. Screening measures

Prior experience of IPV victimization, the risk of current IPV victimization, and the type of IPV experienced (physical, sexual, psychological) were screened for using a nine-item self-report measure developed as part of the present study. To further assess prior experience of IPV and the risk of current IPV an interview was developed as part of the present study based on the Spousal Assault Risk Assessment Guide (Helmus and Bourgon, 2011), which is an IPV risk assessment tool for perpetrators. Interview items included questions about current mental health problems and previous treatment, prior experience of IPV (number and characteristics of abusive relationships and their impact), current contact with an abusive ex-partner, the presence of children, and current perceived threat of IPV.

Alcohol problems was screened for using the Alcohol Use Disorder Identification Test (AUDIT; Saunders et al., 1993). The AUDIT is a self-report measure consisting of 10 items and covers alcohol intake, dependence, and adverse consequences. Total scores range from 0 to 40, with 8 as the cut-point for identifying a potential alcohol problem. Across studies internal consistency reliability has been assessed to Cronbach's $\alpha = 0.83$, and test-retest reliability over one week to a month to Pearson's $r = 0.87$ or above (Reinert and Allen, 2007). A median sensitivity and specificity of 0.86 and 0.89, respectively, has been found across studies (Reinert and Allen, 2002).

2.4.2. Feasibility measures

Several measures of feasibility were used. In addition to participant retention at post and follow-up assessments, treatment adherence was measured at post assessment. Adherence was defined as the number of completed modules belonging to a treatment track (excluding any supplementary modules). A module was considered as completed if the homework assignment of the module was submitted. Participant treatment satisfaction was measured both weekly in the treatment condition and for the entire treatment at follow-up assessment in both conditions. Weekly assessment of satisfaction with the latest module was conducted using a 5-point scale ranging from 1 (*Not at all satisfied*) to 5 (*Very*

Table 2
Overview of the treatment.

Module no.	Treatment track (PTSD or depression)	Module name	Content
1	Both	Your first treatment week: introduction	Information about IPV, CBT principles and procedures, psychoeducation about mental health problems including etiology and maintaining factors. HA: formulating treatment goals.
2	Both	Depression and anxiety in a CBT perspective: the power of thoughts	Psychoeducation about the role of negative cognitions for the occurrence and maintenance of depression and anxiety. HA: identifying negative cognitions and how they may influence depression and anxiety.
3	Both	Your story	Introduction to exposure treatment and trauma processing, psychoeducation about emotion regulation. HA: writing a personal narrative about a trauma memory. Supplement for the PTSD track: psychoeducation about the effects of fear responses on muscle tension and breathing, information on relaxation and diaphragmatic breathing exercises.
4	PTSD	The effects of trauma	Psychoeducation about traumatic events, symptoms, and models explaining why fear remains and may generalize. Introduction to exposure in vivo, avoidance and exposure hierarchy. HA: developing exposure hierarchies for situational triggers and reading the personal narrative.
4	Depression	Depression in a CBT perspective	Psychoeducation about depression in terms of cognitions, emotions, and somatic symptoms, and models explaining why depression occurs and maintains. Introduction to behavioral activation and the association of activity with mood. HA: keeping diary of activities.
5	PTSD	The effects of trauma: exposure in vivo	Further information on exposure in vivo, psychoeducation about safety behaviors. HA: adding use of safety behaviors to items on exposure hierarchies, conducting exposure in vivo.
5	Depression	Depression in a CBT perspective: behavioral activation	Further information on behavioral activation, introduction to activity planning. HA: planning

(continued on next page)

Table 2 (continued)

Module no.	Treatment track (PTSD or depression)	Module name	Content
6	PTSD	The effects of trauma: continued exposure	and performing activities according to plan. Therapist feedback on exposure, information on common reactions to exposure. Psychoeducation about the importance of rewarding oneself for progress. Further psychoeducation about avoidance and safety behaviors. HA: adding details to personal narrative, conducting exposure according to hierarchies.
6	Depression	Depression in a CBT perspective	Activity planning and evaluation of the plan. Psychoeducation about procrastination and how to counteract it. Psychoeducation about the importance of rewarding oneself for progress. HA: planning and performing activities according to plan, developing a menu of rewards.
7	PTSD	The effects of trauma: final exposure	Exposure for personal narrative and exposure in vivo. HA: reading personal narrative, conducting exposure according to hierarchies.
7	Depression	Depression in a CBT perspective: alternative thoughts	Skills in identifying negative cognitions, strategies to counteract them and finding alternatives. HA: developing cognitive conceptualizations, finding alternative thoughts, listing common negative thoughts.
8	PTSD	Managing thoughts and planning for the future	Continued from module 2. Psychoeducation about trauma processing, cognitive styles, cognitive distortions, strategies to counteract negative cognitions and emotions, particularly about guilt and shame. Treatment summary, formulation of maintenance plan.
8	Depression	Depression in a CBT perspective: plan for the future	Further psychoeducation about the power of thoughts, association of thoughts with emotions, strategies to counteract negative cognitions and emotions, particularly about guilt and shame. Treatment summary, formulation of maintenance plan. HA: using strategies to manage negative cognitions, summarizing treatment.
9	Both (not part of treatment)	Termination	Psychoeducation about setbacks and relapse and strategies to avoid them, associations of physical

Table 2 (continued)

Module no.	Treatment track (PTSD or depression)	Module name	Content
	Supplementary modules	Social anxiety 1 and 2, panic 1 and 2, agoraphobia, depression, sleep.	activity and sleep with wellbeing. Information and psychoeducation, for example, safety behaviors, self-focus, negative cognitions, breathing, sleep hygiene. HA example: developing exposure hierarchy and conducting exposure.

Note. PTSD = posttraumatic stress disorder, IPV = intimate partner violence, CBT = cognitive-behavioral therapy, HA = homework assignment.

satisfied), while satisfaction with the entire treatment was assessed using a 7-point scale ranging from 1 (*Very much dissatisfied*) to 7 (*Very much satisfied*). In addition, participant satisfaction with their own effort concerning work with the latest module was assessed weekly in the treatment condition using a 5-point scale ranging from 1 (*Not at all satisfied*) to 5 (*Very satisfied*). Participants' general recollection of treatment content at follow-up assessment was measured in both conditions using a 7-point scale ranging from 1 (*Very weak recollection*) to 7 (*Very strong recollection*). Further, participants' use of treatment modules at follow-up assessment was explored in both conditions. Finally, therapist time spent on delivering treatment in the treatment condition was measured.

2.4.3. Outcome measures

PTSD symptoms were assessed using three measures. The Post-traumatic Stress Diagnostic Scale (PDS; Foa et al., 1997) includes 17 items and the frequency of each item in the past month is rated on a 4-point scale, yielding total scores ranging from 0 to 68. Internal consistency has been assessed to $\alpha = 0.92$ and test-retest reliability over two to three weeks to $r = 0.83$ (Foa et al., 1997). PTSD symptoms were also assessed using the Impact of Event Scale-Revised (IES-R; Weiss and Marmar, 1997), which is a 22-item measure with responses of how distressing each item has been during the past week on a scale from 0 to 4, with total scores constituting the mean of non-missing items. Internal consistency has been assessed to $\alpha = 0.96$ in a combined clinical and non-clinical sample (Creamer et al., 2003). A third measure used to assess PTSD symptoms was the Primary Care PTSD Screen (PC-PTSD; Prins et al., 2003), which consists of four items with items responded to using a yes-no format, yielding total scores ranging from 0 to 4. One-month test-retest reliability has been assessed to $r = 0.83$ (Prins et al., 2003).

Depressive symptoms were assessed using two measures. The Beck Depression Inventory-II (BDI-II; Beck et al., 1996) consists of 21 items rated from 0 to 3 according to severity of difficulty experienced, with total scores ranging from 0 to 63. Beck et al. (1996) reported an internal consistency of $\alpha = 0.93$ in a non-clinical sample, and an $\alpha = 0.92$ in a clinical sample. A review of the BDI-II found an internal consistency of around $\alpha = 0.90$ (ranging from $\alpha = 0.83$ to $\alpha = 0.96$) across studies and test-retest reliability ranging from $r = 0.73$ to $r = 0.96$ over a mean retest interval of two weeks (Wang and Gorenstein, 2013). Depressive symptoms were also assessed using the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). The PHQ-9 consists of nine items, which are responded to on a scale from 0 to 3 according to the extent to which symptoms were present during the last two weeks, with total scores ranging from 0 to 27. Internal consistency has been assessed to $\alpha = 0.86$ and $\alpha = 0.89$ in two different clinical populations, and the 2-day test-retest reliability to $r = 0.84$ (Kroenke et al., 2001).

General anxiety symptoms were assessed using the Beck Anxiety Inventory (BAI; Beck et al., 1988), which is a 21-item measure of the

severity of anxiety. Respondents are asked to rate how much they have been bothered by each symptom over the past week on a 4-point scale from 0 to 3, yielding total scores ranging from 0 to 63. The BAI has shown an internal consistency of $\alpha = 0.92$, and a 1-week test-retest of $r = 0.75$ (Beck et al., 1988).

Finally, quality of life was assessed using the Quality of Life Inventory (QOLI; Frisch et al., 1992), which is a measure consisting of 16 items corresponding to 16 areas of life. Items are first weighted from 0 to 2 in terms of importance and then given a satisfaction rating from -3 to 3. Total scores are derived by averaging all weighted items (weight \times satisfaction) that have nonzero importance ratings, thus ranging from -6 to 6. Average internal consistency across seven diagnostic groups has been assessed to $\alpha = 0.81$ (Lindner et al., 2013).

2.4.4. Interview measures

Psychiatric diagnosis was assessed by clinicians using the Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). Cohen's kappa values for interrater reliability have been assessed to above 0.75 for all diagnoses (70% of values to 0.90 or higher), and 1–2 days test-retest reliability using a second interviewer for the retest to $r = 0.76$ across diagnoses (Sheehan et al., 1998). In the same study, sensitivity and specificity were assessed to 0.70 or higher and 0.85 or higher, respectively, across diagnoses.

General clinical improvement was assessed using the Clinical Global Impression – Improvement (CGI-I; Guy, 1976). The CGI-I is a clinician-administered measure consisting of a single item assessing how much a participant has improved or worsened relative to a baseline state at the initiation of an intervention. Responses are made on a 7-point scale ranging from 1 (*Very much improved*) to 7 (*Very much worse*). The measure was administered at post and follow-up assessments. The CGI-I has shown good concurrent validity with other outcome measures (Berk et al., 2008; de Beurs et al., 2019).

2.5. Data analysis

Data were analyzed using the SPSS (Version 26, SPSS Inc., Chicago, IL). Proportions, means and standard deviations were calculated for feasibility measures. Differences on outcome measures at pre assessment between participants who retained in the study and those who dropped out at post and follow-up assessments were examined using Mann-Whitney tests. For preliminary evaluation of treatment effects, multilevel modeling was used to estimate between-group effects on outcome measures from pre to post assessment, and within-group effects from pre to follow-up assessment. Because participants in the waitlist control condition received delayed treatment following post assessment, within-group effects from pre to follow-up assessment were estimated for the entire sample (combining the treatment and control conditions), with the pre assessment point coded as Time0 and follow-up assessment point coded as Time48 for the treatment condition (i.e., 48 weeks following pre assessment, constituting a 40-week follow-up period) and Time40 for the control condition (i.e., 40 weeks following pre assessment, constituting a 32-week follow-up period). The maximum likelihood method was used to estimate model parameters and different covariance structures (variance components and unstructured) were tested. Models were built in a stepwise fashion starting with a basic model with a fixed intercept, then adding random parameters (intercept and slope), and finally adding a time by condition interaction term to the model. Each model's fit to observed data was evaluated using the likelihood ratio test with significance set at 0.05. A model with significantly better fit than a previous model was retained. Standardized effect size for between-group effects at post assessment and for within-group effects at follow-up assessment was calculated as Cohen's d for multilevel models by the formula provided in Feingold (2015; Eq. (1)), using the standard deviation for the entire sample at pre assessment (following recommendations in Feingold, 2013). For calculation of d at follow-up assessment, the pooled follow-up assessment point for the treatment

and control conditions since pre assessment was used (i.e., $48 + 40 / 2$). For model-based d , 95% confidence intervals (CI) were calculated by the formulas provided in Feingold (2015; Eqs. (7) and (8)). As part of the multilevel modeling procedure, missing data were estimated using available data. Data from all participants randomly allocated to the treatment or waitlist control conditions were used in the multilevel models, following the principle of intention-to-treat.

Remission in participants at post and follow-up assessments was defined as no longer meeting diagnostic criteria for PTSD or depression according to the MINI. Differences in remission from PTSD and depression between conditions at post assessment were investigated using chi-square test and Fisher's exact test. Treatment response was assessed using the reliable change index (RCI; Jacobson and Truax, 1991), which was calculated using internal consistency (following recommendations in Lambert and Ogles, 2009) of the IES-R (Creamer et al., 2003) and the BDI-II (Beck et al., 1996), respectively, and the sample standard deviation of these measures at pre assessment. An RCI of $z \geq -1.96$ indicates reliable improvement, while an RCI of $z \geq 1.96$ indicates reliable deterioration. Differences in improvement and deterioration on the IES-R and the BDI-II between conditions at post assessment were investigated using Fisher's exact tests. Treatment response was also assessed using the CGI-I, where responses of “very much improved” and “much improved” were combined into an improved category and responses of “minimally worse”, “much worse” and “very much worse” were combined into a deteriorated category. Differences on the CGI-I between conditions at post assessment were examined using Fisher's exact test.

3. Results

3.1. Feasibility

Measures of feasibility included participant retention, treatment adherence, satisfaction with treatment and with own effort concerning module work, recollection of treatment content, participants' use of modules following treatment completion, and therapist time spent on delivering treatment. Six (9.4%) participants dropped out from pre to post assessment; five (15.6%) in the treatment condition and one (3.1%) in the control condition, leaving 58 (90.6%) of all participants at post assessment. From post to follow-up assessment, when participants in the control condition received treatment, a further eight (12.5%) participants dropped out; one (3.1%) in the treatment condition and seven (21.9%) in the control condition. An additional eight (12.5%) participants were unable to reach due to faulty contact information or preferred not to respond to attempts at establishing contact. Thus, 42 (65.6%) of all participants were available at follow-up assessment, of which 36 (56.3%) took part in the interview. There were no statistically significant differences on outcome measures at pre assessment between participants who retained in the study and those who dropped out, neither at post assessment (U s ranging from 114.50 to 187.50, p s ranging from 0.067 to 0.801) nor follow-up assessment (U s = 370.50–464.00, p s = 0.157–0.916).

Considering treatment adherence, participants completed on average 5.0 (62.5%) modules ($SD = 2.4$, range = 0–8) of a total of eight modules per treatment track. Twenty-one (65.6%) participants completed at least 50% of the modules, while six participants (18.8%) completed all eight modules, and one (3.1%) participant did not complete any module. Regarding satisfaction with the latest module as assessed weekly using a 5-point scale, participants were moderately satisfied ($M = 3.6$, $SD = 0.8$, range = 2–5) across the eight modules, with no participant being “not at all satisfied”. Considering satisfaction with the entire treatment as measured using a 7-point scale at follow-up assessment, participants were “much satisfied” with treatment ($M = 6.3$, $SD = 0.8$, range = 5–7), with no participant being dissatisfied. Regarding satisfaction with own effort on work with the latest module as assessed weekly using a 5-point scale, participants were moderately

satisfied ($M = 3.0$, $SD = 0.8$, range = 1.6–4.8). Using a 7-point scale, participants reported moderately strong recollection of treatment content ($M = 5.2$, $SD = 1.5$, range = 1–7) at follow-up assessment. Of the 36 respondents, 29 (80.6%) reported that they still used the treatment modules at follow-up assessment. Finally, on average, therapists spent a total of 2.1 h ($SD = 1.2$, range = 1.4–3.3) on treatment per participant, with an average of 0.3 h per week.

3.2. Treatment effects

3.2.1. Between-group effects on outcome measures at post assessment

Observed means and standard deviations for outcome measures at pre and post assessments are presented in Table 3. At post assessment, multilevel models including random intercept and slope and a time by condition interaction term provided the best fit on the IES-R, PC-PTSD and the BDI-II. Between-group effects were large and statistically significant and in favor of the treatment condition on the IES-R, $F(1, 59.71) = 13.82$, $p < .001$, Cohen's $d = 0.89$, 95% CI [0.41, 1.36], the PC-PTSD, $F(1, 59.73) = 11.17$, $p = .001$, $d = 1.08$ [0.40, 1.75], and the BDI-II, $F(1, 58.32) = 7.18$, $p = .010$, $d = 0.86$ [0.22, 1.50]. These effects indicate greater improvement on these measures in the treatment condition relative the control condition at post assessment. Models including random intercept and slope provided the best fit on the PDS, PHQ-9, and the BAI; adding a time by condition interaction term did not improve the fit. A model including a random intercept only provided the best fit on the QOLI. This indicates that there were no differences in effects on the PDS, PHQ-9, BAI, and the QOLI between conditions at post assessment.

Table 3
Observed means and standard deviations for outcome measures at pre, post, and follow-up assessments.

	Pre		Post		FU ^a	
	M	SD	M	SD	M	SD
PDS						
Treatment	30.28	12.28	24.65	14.84	17.61	12.85
Control	28.44	12.94	31.17	12.86		
IES-R						
Treatment	43.13	14.23	28.42	16.55	22.61	16.61
Control	42.03	16.09	41.30	14.49		
PC-PTSD						
Treatment	2.97	1.09	1.27	1.34	1.17	1.34
Control	2.59	1.27	2.13	1.43		
BDI-II						
Treatment	25.59	8.75	17.35	14.29	13.56	11.79
Control	25.72	10.34	25.57	9.88		
PHQ-9						
Treatment	12.31	5.31	7.62	7.22	6.27	5.64
Control	12.50	5.97	10.53	6.36		
BAI						
Treatment	20.47	10.60	15.62	11.33	10.80	10.27
Control	21.06	10.76	20.70	12.50		
QOLI						
Treatment	0.18	1.71	0.56	1.92	1.06	2.05
Control	0.11	1.99	0.07	1.57		
CGI-I						
Treatment			2.70	1.19	2.50	1.13
Control			4.14	0.88		

Note. FU = Follow-up assessment, PDS = Posttraumatic Stress Diagnostic Scale, IES-R = Impact of Event Scale-Revised, PC-PTSD = Primary Care PTSD Screen, BDI-II = Beck Depression Inventory-II, PHQ-9 = Patient Health Questionnaire-9, BAI = Beck Anxiety Inventory, QOLI = Quality of Life Inventory, CGI-I = Clinical Global Impression-Improvement.

^a Combined sample of treatment and control conditions after the control condition had received delayed treatment.

3.2.2. Remission and treatment response at post assessment

Considering remission from PTSD according to the MINI, of participants who met diagnostic criteria at pre assessment, ten (47.6%) in the treatment condition and one (6.7%) in the control condition no longer met criteria at post assessment. The differences of meeting or not meeting criteria for PTSD between conditions were statistically significant, $\chi^2(1) = 6.92$, $p = .011$. Of the 20 participants allocated to the PTSD treatment track who met criteria for PTSD at pre assessment, seven (43.8%) no longer met criteria for PTSD at post assessment; the proportion was the same at follow-up assessment. Regarding remission from depression according to the MINI, of participants who met diagnostic criteria at pre assessment, seven (38.9%) in the treatment condition and three (21.4%) in the control condition no longer met criteria at post assessment. The differences of meeting or not meeting criteria for depression between conditions were not statistically significant, $\chi^2(1) = 4.03$, $p = .095$. Of the 11 participants allocated to the depression treatment track who met criteria for depression at pre assessment, three (42.9%) no longer met criteria for depression at post assessment; the proportion was the same at follow-up assessment.

At post assessment, 14 (53.9%) participants in the treatment condition and six (20.0%) in the control condition had achieved reliable improvement on the IES-R, while one (3.9%) participant in the treatment condition and three (10%) in the control condition showed reliable deterioration. These differences of reliable change on the IES-R between conditions were statistically significant, $\chi^2(1) = 2.88$, $p = .013$. On the BDI-II, 17 (65.4%) participants in the treatment condition and four (13.3%) in the control condition had achieved reliable improvement at post assessment, while five (19.2%) in the treatment condition and seven (23.3%) in the control condition showed reliable deterioration. These differences of reliable change on the BDI-II between conditions were close to statistically significant, $\chi^2(1) = 5.30$, $p = .052$. At post assessment, 12 (52.2%) participants in the treatment condition and two (6.9%) in the control condition had improved on the CGI-I, while two (8.7%) participants in the treatment condition and seven (24.1%) in the control condition had deteriorated. These differences between conditions were statistically significant, $\chi^2(1) = 9.27$, $p = .007$.

3.2.3. Within-group effects on outcome measures at follow-up assessment

Observed means and standard deviations for outcome measures at follow-up assessment are presented in Table 3. At follow-up assessment, when the control condition had received delayed treatment, multilevel models including random intercept and slope provided the best fit on the BDI, PHQ-9, and the QOLI. Within-group effects were small to large and statistically significant on the BDI-II, $F(1, 45.10) = 49.43$, $p < .001$, $d = 1.30$ [0.93, 1.67], the PHQ-9, $F(1, 46.85) = 42.65$, $p < .001$, $d = 1.10$ [0.71, 1.41], and the QOLI, $F(1, 43.25) = 14.32$, $p < .001$, $d = 0.48$ [0.24, 0.72]. At follow-up assessment, models including a fixed intercept provided the best fit on the PDS, IES-R, PC-PTSD, and the BAI. Within-group effects were large and statistically significant on the PDS, $F(1, 105) = 23.68$, $p < .001$, $d = 0.98$ [0.56, 1.37], the IES-R, $F(1, 105) = 42.44$, $p < .001$, $d = 1.34$ [0.93, 1.75], the PC-PTSD, $F(1, 105) = 44.32$, $p < .001$, $d = 1.48$ [1.11, 1.85], and the BAI, $F(1, 105) = 22.54$, $p < .001$, $d = 0.96$ [0.54, 1.33]. Thus, decreases were observed on all measures, except for on the QOLI where there was an increase, from pre to follow-up assessment.

3.2.4. Remission and treatment response at follow-up assessment

At follow-up assessment, 15 (41.7%) participants no longer met criteria for PTSD and 16 (50.0%) no longer met criteria for depression. On the IES-R, 29 (70.7%) participants had made reliable improvement as assessed using the RCI and five (12.2%) reliable deterioration. On the BDI-II, 28 (68.3%) participants had achieved reliable improvement and three (7.3%) showed reliable deterioration. Of the 36 respondents who took part in the interview at follow-up assessment, 21 (58.3%) had improved on the CGI-I, while two (5.6%) had deteriorated. Six (16.7%) participants had sought additional psychological treatment from post to

follow-up assessment.

4. Discussion

The primary aim of the present pilot study was to explore the feasibility of ICBT individually tailored to the predominant symptomatology of PTSD or depression in survivors of IPV. A secondary aim was to conduct a preliminary evaluation exploring the short- and long-term effects of the treatment in comparison to a waitlist control condition. Results showed that the treatment was feasible. Attrition rate at post assessment was low, participants were satisfied with treatment, and they perceived treatment content to be easy to remember. Average therapist time spent on delivering treatment was only 2 h per participant, an important aspect of feasibility in terms of resource management. However, treatment adherence was moderate in terms of completed modules. It may be that further tailoring of the treatment to participant symptom profile and preferences could have resulted in better adherence.

Results of the preliminary evaluation of treatment effects showed that there were large and statistically significant between-group effect sizes on several measures of PTSD and depression at post assessment, favoring the treatment condition. However, there were no statistically significant differences between conditions on other measures of PTSD and depression, and on measures of anxiety and quality of life. Almost 48% of participants in the treatment condition who met diagnostic criteria for PTSD at pre assessment were in remission at post assessment, and 39% of participants who met criteria for depression. Considering treatment response, 54% of participants in the treatment condition showed reliable improvement on a measure of PTSD and approximately 65% on a measure of depression. From pre to follow-up assessments, when the control group had received delayed treatment, there were large and statistically significant within-group effect sizes for the entire sample on most outcome measures. Furthermore, almost 42% of participants no longer met criteria for PTSD and 50% of participants no longer met criteria for depression. Around 70% had made reliable improvement on measures of PTSD and depression.

Consistent with hypotheses, individually tailored ICBT for survivors of IPV proved feasible and produced large effect sizes. The results of the present study are similar to face-to-face CBT for this population (Arroyo et al., 2017), although effect sizes were somewhat smaller and remission rates lower. For example, in the first RCT of females with a PTSD diagnosis, Kubany et al. (2003) randomly allocated 37 participants to Cognitive Trauma Therapy for Battered Women (CTT-BW) or a waitlist control (delayed treatment) condition. Attrition was 5.3% in the treatment condition at post assessment (15.6% in the present study). On average, participants completed 91.6% of sessions (62.5% in the present study). Between-group effect sizes on measures of PTSD and depression ranged from $d = 2.3$ to 3.3 at post assessment ($d = 0.86$ – 1.08 in the present study). A total of 94.4% of participants in the treatment condition no longer met diagnostic criteria at post assessment (47.6% in the present study). A second study on CTT-BW by Kubany et al. (2004) used the same design and included 125 females with a PTSD diagnosis. Attrition was 27.0% in the treatment condition at post assessment. Between-group effect sizes on measures of PTSD and depression ranged from $d = 1.4$ to 1.8 and 91.3% in the treatment condition no longer met diagnostic criteria for PTSD at post assessment. Effects were maintained at 3- and 6-month follow-up assessments.

A study by Johnson et al. (2011) was conducted in shelters and included 70 females with PTSD or subthreshold PTSD. Participants were randomly allocated to a treatment condition who received standard shelter services plus a CBT program called Helping to Overcome PTSD through Empowerment (HOPE) or a control condition who received standard services alone. Attrition was 6.7% in the treatment condition. On average, participants completed 56.7% of sessions. There were no statistically significant differences on PTSD diagnostic status or symptoms between conditions at post assessment, however, large differences

were observed on depression symptoms. A total of 63.2% of participants in the treatment condition achieved reliable change on a measure of PTSD (53.9% in the present study). Effects were not improved over follow-up assessments, except for depression and reabuse rates. A limitation of the study was that most participants left shelter prior to treatment completion. A second study on the HOPE program by Johnson et al. (2016) included 60 females from the same population and added treatment that continued for three months after leaving shelter. Attrition was 13.3% in the treatment condition. On average, participants completed 79.4% of sessions. Between-group effect sizes on measures of PTSD and depression were moderate (0.57 and 0.59, respectively) at post assessment. There were no statistically significant differences in PTSD diagnostic status between conditions at post assessment. A total of 76.9% of participants in the treatment condition achieved reliable change on a measure of PTSD. Effects were maintained or improved at 3- and 6-month follow-up assessments.

There are several possible explanations of the differences in effect size of the present study compared to the studies of face-to-face CBT. First, ICBT may be the inferior delivery format. However, meta-analyses of ICBT for depression and anxiety disorders show that it is as effective as face-to-face CBT (Andersson et al., 2019). There is little reason to believe that the delivery formats produce differential effects specifically in the treatment of PTSD, considering that PTSD is characterized by anxiety-related cognitions and behaviors and approached in much the same way as anxiety disorders. However, a recent review and meta-analysis of ICBT for PTSD could not identify any study that compared the delivery formats (Lewis et al., 2018).

A second possible explanation pertains to between-study differences. In addition to differences of design (e.g., setting, comparison condition), in all comparison studies an inclusion criterion was to meet a PTSD diagnosis, whereas the present study did not include this criterion or of any other psychiatric diagnosis. Indeed, only 57.1% of participants met criteria for PTSD and 49.2% for depression at pre assessment, while 18.8% did not meet criteria for any diagnosis. A diagnosis of PTSD may indicate more severe symptomatology or functional impairment, which may leave more room for improvement than mere symptoms of PTSD. Furthermore, although treatment in the present study was tailored to the predominant symptomatology of PTSD or depression it started with three sessions which were common to all participants, whereas in the other studies treatment focused on PTSD from the start. This difference in treatment content, together with a larger treatment dose in terms of sessions completed in the comparison studies, may have influenced effects on PTSD symptoms. A third possible explanation pertains to differences in treatment content. Although treatment in the present study involved some techniques targeting trauma-related guilt cognitions in later sessions, the CTT-BW is designed to focus on this type of guilt using specialized procedures permeating treatment (Kubany et al., 2004). Furthermore, while treatment in the present study did not involve explicit strategies targeting empowerment, such strategies are included in CTT-BW and, in particular, the HOPE program (Johnson et al., 2016). It may be that focusing on the IPV-relevant constructs of guilt and empowerment produces larger effects.

The present study had some limitations which should be considered when interpreting the results. First, no cut-point of symptom severity was employed for inclusion of participants, and no specific criteria were used to allocate participants to treatment track, except for clinical judgement of which track would be most effective to alleviate symptoms. This introduces some ambiguity regarding who will likely benefit from the treatment. However, symptom severity and diagnoses at pre assessment, among other participant characteristics, may provide sufficient information. Second, because of the pilot design, the present study had a small sample size, and no power calculation was conducted; thus, model parameter estimates of treatment effects may have been lacking in precision and the analyses may have been unable to detect small differences between conditions as statistically significant. However, treatment effectiveness was not a primary aim of the present study

and needs to be evaluated in adequately powered RCTs. Third, there was a substantial loss of participants from post to follow-up assessment. Although model parameters were estimated with the available data, the loss of participants may have yielded the parameters less reliable, affecting the within-condition analyses at follow-up assessment. Fourth, moderate treatment adherence in terms of completed modules has implications for both feasibility and the evaluation of treatment effects. Finally, the period from pre to follow-up assessment was 48 weeks in the treatment condition and 40 weeks in the control condition; although not a primary aim of the present study, this difference may have influenced the pre to follow-up results of treatment effects.

Generalizability may be limited to well-educated survivors of IPV seeking treatment, and to settings characterized by high gender equality and with access to professional therapists or student therapists under supervision. However, ICBT has the potential benefit of transcending barriers pertaining to limited community resources and treatment availability, and geographical constraints. Moreover, partner surveillance, safety, and issues of stigma, humiliation, guilt, and shame, factors that are related to gender equality and may prevent members of this population from seeking face-to-face treatment (Rempel et al., 2019), may be less of a concern with ICBT, enabling private interactions at a distance.

Since 2012 when the present study was conducted there have been advancements in information technology. In addition to presentation in text, treatment procedures and techniques are increasingly presented as streamed video or in audio files, patients can access treatment on other devices than a computer, such as on a smartphone or a tablet, and broadband access has enabled videoconferencing systems and video chat (Andersson and Carlbring, 2017). Future research may investigate how the treatment in the present study may be developed and the findings improved by capitalizing on new technology.

To conclude, the potential benefits of ICBT for survivors of IPV are manifold, and the treatment format may be particularly advantageous in low-income and middle-income countries with limited community resources and lower gender equality. The Covid 19-pandemic has seen a rise in the prevalence of IPV (Aguero, 2021; Gosangi et al., 2021), which even further points to the relevance of ICBT. However, studies of ICBT for survivors of IPV are lacking. To our knowledge, the present study is the first RCT. Moreover, it is one of few studies at all of ICBT for PTSD (Lewis et al., 2018). Results showed that ICBT for survivors of IPV was feasible and produced statistically significant and clinically relevant effects. Further research of ICBT for this population, which may include a focus on constructs such as guilt and empowerment, is highly warranted.

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