

Psychological Trauma: Theory, Research, Practice, and Policy

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Preferences for Trauma Treatment: A Systematic Review of the Empirical Literature

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The prevalence of trauma histories and related psychological problems is high in general clinical settings, but little is known about trauma patient preferences for mental health treatment. The purpose of this article is to systematically review and synthesize the literature on treatment preferences in survivors of traumatic events. Studies were identified using comprehensive searches of PsycINFO, Medline, PubMed, Published International Literature on Traumatic Stress, and Cumulative Index to Nursing and Allied Health Literature databases. Included in the review were articles published between January 1980 and September 2014, in English that reported patient preference of treatment for trauma related disorders in either clinical or nonclinical (e.g., analog) samples. The total number of individual participants was 6,091. Of the identified studies, 35 were quantitative and 6 were qualitative. Methodological concerns included the use of analog samples, small sample sizes, and the assessment of a limited number of treatment options (e.g., asking about only 1 type of psychotherapy or medication). Overall, participants expressed a preference for psychotherapy over medication and for talking about their trauma. Understanding and addressing trauma patient preferences may assist in improving treatment initiation as well as facilitate engagement, retention and outcome.

Keywords: patient preference, trauma, posttraumatic stress disorder, treatment

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Conservative estimates suggest that between 60% to 80% of adults in the United States and Europe have experienced at least one potentially traumatic lifetime event, such as child maltreatment, interpersonal violence, natural disaster, war, or life-threatening accidents (de Vries & Olf, 2009; Kessler et al., 1995). Although most individuals who experience such an event do not experience long-term negative consequences, a substantial minority of individuals with a trauma history develop significant mental health difficulties. Indeed, traumatic exposure has been implicated as a risk factor for numerous major mental disorders, including depression, substance abuse/dependence, and posttraumatic stress disorder (PTSD; Green et al., 2010). It is estimated that 20 million Americans develop PTSD at some point in their life (Kessler et al., 2005) and those with PTSD often have, physical health-related

problems, work less, and are less productive when they do work (Kessler, 2000). Thus, the potential psychological consequences of trauma and PTSD are large and represent significant public health problems.

A growing body of research has demonstrated that including patient preference and choice in mental health treatment might lead to better adherence and outcome. For example, in a meta-analysis examining the impact of patient treatment preference on outcomes for a wide range of disorders and problems (e.g., depression, anxiety, substance abuse, severe mental illness, chronic pain, etc.), those who received their preferred treatment were 50% less likely to drop out than those who did not receive their preferred treatment (Swift & Callahan, 2009). Additionally, patients who received their preferred treatment had an almost 60% greater chance of demonstrating improvement. Although patient preferences have been given considerable attention in mental health services research, until recently limited attention has been paid to trauma patients in regards to their preferences for treatment.

Over the past few decades there has been significant progress in the development of evidence-based therapies (EBTs) for a broad range of disorders and problems (for review, see APA Presidential Task Force on Evidence-Based Practice, 2006), including both pharmacological and psychological interventions for trauma. Indeed, numerous guidelines (for a review, see Forbes et al., 2010) have identified psychological treatments for PTSD that have been

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found to be efficacious in randomized controlled trials, including Cognitive Processing Therapy (CPT; Resick & Schnicke, 1996), Prolonged Exposure (PE; Foa, Hembree, & Rothbaum, 2007) and Eye Movement Desensitization and Reprocessing Therapy (EMDR; Shapiro, 2001). However, these EBTs appear to be infrequently used in the treatment of PTSD, and when applied, may not be delivered in sufficient doses to be effective (e.g., Becker, Zayfert, & Anderson, 2004). There are several reasons for this research-practice gap, including providers' attitudes toward EBTs (i.e., lack of compatibility of EBT with providers' existing practices and beliefs), organizational or setting constraints (e.g., time and resources for a full protocol; Cook et al., 2015) and the perception that some patients are unsuitable candidates for EBTs for PTSD because of such factors as the presence of psychiatric comorbidities (e.g., dissociation; Cook, Dinnen, Simiola, Thompson, & Schnurr, 2014).

Patients are likely key stakeholders in decisions regarding EBTs. For example, patient perspectives on treatment may be important determinants of providers' willingness to try new psychotherapies and integrate them into their existing practice. Additionally, anticipations of negative reactions from patients may serve as a barrier to provider adoption of EBTs. Thus, understanding patients' needs and preferences for treatment may help with engagement and adherence in use of EBTs for PTSD. Moreover, information about patient preference may be an important component of dissemination of EBTs for PTSD. For instance, if providers are informed that many patients are willing to address their traumatic memories in therapy, providers may be less hesitant to use these treatments. Lastly, understanding preferences may also aid in refining education materials regarding treatment and in helping providers tailor discussions of treatment (Cochran, Pruitt, Fukuda, Zoellner, & Feeny, 2008).

The purpose of this article was to systematically review and synthesize the empirical literature on preferences for mental health treatment in trauma survivors and those with PTSD. This review provides some preliminary answers regarding the following question: What treatments (or types of treatments) do persons exposed to trauma or persons with PTSD prefer?

Method

Studies were identified through comprehensive searches of the PsycINFO, Medline, PubMed, Published International Literature on Traumatic Stress, and Cumulative Index to Nursing and Allied Health Literature electronic databases for research published between January 1980 and September 2014. In addition, the reference list of each journal article identified for inclusion was examined to identify any studies not found in the database search. To construct an effective and comprehensive search, a list of thesaurus specific search terms was developed and adapted for use in each database. Combinations of the following sets of search terms were used in each bibliographic database: (a) preferences, patient preferences, choice behavior, decision making, and patient satisfaction; and (b) PTSD, trauma, and emotional trauma. The search was limited to peer-reviewed published empirical research in English, and thus, excluded dissertations and theses, commentaries and reviews, and books and chapters.

Studies included for review were quantitative or qualitative research that reported participant preference of treatment for

trauma and related disorders such as PTSD or a dual diagnosis including PTSD in either clinical or nonclinical (e.g., analog) samples. Of the studies identified, several were excluded for a variety of reasons (see supplementary materials Figure 1 online¹). Three studies regarding traumatic injury were included in this review because of their focus on psychosocial treatment or rehabilitation after a traumatic injury; the rest were excluded because of the primacy of focus on medical intervention in response to traumatic injury, without studying mental health treatment.

The initial search yielded 672 unique articles (see Figure 1). After careful review of the each abstract, 80 full articles were read in their entirety for determination of inclusion. These articles were then evaluated based on inclusion and exclusion criteria. From the 80 full articles reviewed, 41 met inclusion criteria: 35 quantitative studies and 6 qualitative studies (see Tables 1 and 2²). In total, 40 independent samples were included, of which 11 examined analog samples. Of these, three additional articles had redundant findings presented in earlier publications (Angelo, Miller, Zoellner, & Feeny, 2008; Cochran et al., 2008; Zoellner, Feeny, & Bittinger, 2009) and were not considered independent samples.

An assessment of each article meeting each inclusion criteria was conducted to evaluate the quality of the studies by determining the potential biases that may have impacted participants' stated preferences by two independent raters (JC and VS; Khan, Kunz, Kleijnen, & Antes, 2003). Articles included in the review were determined to have had minimal confounding variables. The discussion section addresses the identified limitations in greater depth. Risk of bias (e.g., selection, detection bias) within and across studies was approached using the Cochrane Handbook of Systematic Reviews (Higgins & Green, 2011).

Data extraction included study population demographics (e.g., age, ethnicity), type of trauma exposure, PTSD and other diagnostic prevalence, research design, treatment options presented, method and procedures to evaluate treatment preferences, and outcomes. A narrative synthesis approach was utilized because of the variability and complexity of the studies included. The quantitative and qualitative studies were synthesized separately.

Results

In total, 6,091 individuals are represented in the present review. Participants ranged in age from 18–70 ($M = 33.4$) and 38.8% ($n = 1,825$) were from non-White racial/ethnic groups.³ Approximately 62.6% ($n = 3,721$) of participants were female, with nine of the studies (22.5%) using female-only samples, and one study using a male-only sample (2.5%). One-third of the studies used military samples (i.e., active duty or veterans; $n = 13$, 32%), and 29% ($n = 11$) used analog methods (i.e., asking participants to imagine what treatment they would choose) that included samples of undergraduate students, law enforcement officers, community samples, and military personnel. Twenty-six (68%) studies recruited participants with a full or partial PTSD diagnosis, and four (11%) included

¹ Figure 1 is available as online supplementary material.

² Because of space limitations we have included online supplementary tables that include this detailed information (i.e., measure of preference, sample size and demographics, trauma type/PTSD status, treatment options presented, and results) of every article reviewed.

³ Nine studies did not report racial/ethnic composition.

Table 1
Quantitative Trauma Treatment Preference Articles in Chronological Order

Study	<i>N</i>	Mean age (<i>SD</i> ; range)	% Female	% Non-White	Trauma type/PTSD status	Treatment options presented
Brown et al. (1998)	42	37.2 (8.69; 18–53)	62	21.4	PTSD + and SUD +	PTSD tx, SUD tx, Concurrent approach, No tx
Roy-Byrne et al. (2003)	367	33.8 (10.8)	70.6	32.5	47% sexual and 53% physical assault	Interest in counseling and/or medication
Zoellner et al. (2003) ^b	273	19.41 (1.94)	100	39.2	60.8% PTE; 18% PTSD +	PE, SER, No tx
Najavits et al. (2004)	77	36.77 (10.10)	100	26	PTSD + and SUD +	PTSD tx, SUD tx, Concurrent approach, No tx
Back et al. (2006)	23	34.1	65	—	PTSD + and SUD +	PTSD tx, SUD tx, Concurrent approach, No tx
Tarrier et al. (2006)	330	22.5 (4.9)	63.9	—	—	Psychoeducation, IE, in vivo exposure, VR, guided imagery and rescripting, CT, combined CT with exposure, stress management, EMDR, computer based therapy, psychodynamic, e-therapy, group, and family therapy
Becker et al. (2007)	160	18.64 (0.73)	62	—	36% PTE; 7% PTSD +	Exposure, CBT, psychodynamic, SER, TFT, My Therapy Buddy, EMDR
Wong et al. (2007)	25	29.32 (9.29)	12	88	72% probable PTSD caused by physical assault	“How interested would you be in a program designed to help patients who were injured in the face with their anxiety, depression and alcohol problems?”
Jeannette & Scoboria (2008)	142	41 (8.3; 24–59)	—	—	—	CISD, one-to-one debriefing, informal discussion, no tx
Batten et al. (2009)	114	53	8	71	PTSD +	Family/significant other involvement in PTSD tx
Becker et al. (2009)	379	32 (10.36)	29	49	48% PTE; 9.5% PTSD +	CISD, exposure, CPT, SER, EMDR, psychodynamic, and BEP
Feeny, Zoellner, & Kahana (2009a) ^c	324	19.57 (4.2)	100	34.6	45% PTE	PE, SER, No tx
Feeny et al. (2009b) ^{a,d}	74	31.82 (13.10)	100	34.6	100% PTE	PE, SER, No tx
	31	31 (9.08)	100	25.8	Assault related PTSD +	PE, SER
Khaylis, et al. (2011)	97	28.5 (6.3)	7.2	10.3	Nearly half screened PTSD +	Individual, group, or couple/family therapy
Najavits (2011)	106	43 (14.06)	59.4	31.1	36 PTSD+, 35 PG+, 35 both PTSD+ –PG +	Group, individual, psychodynamic, exposure, contingency management, Seeking Safety, medication, self-help, family or couples, books, computer-based self-help, alternative healing, coaching, and body therapy
Spence et al. (2011)	244	41.8 (12.2)	77.5	—	100% screened PTSD +	Internet therapy versus face-to-face therapy for PTSD
Epstein et al. (2012)	18	32.7 (7.0; 22–48)	0	45	100 one + PTEs and complaints of difficulty sleeping	Sleep education and hygiene, stimulus control, sleep restriction, relaxation, and mindfulness.
Pruitt et al. (2012) ^a	439	19 (1.35; 18–65)	57.8	43	59% one + PTE	PE, SER, Both, No tx (table continues)

Table 1 (continued)

Study	<i>N</i>	Mean age (<i>SD</i> ; range)	% Female	% Non-White	Trauma type/PTSD status	Treatment options presented
Shalev et al. (2012)	203 296	38.92 (12.53) 38.53 (11.84; 18–70)	57.9 55.8	65 —	96.6% one + PTE PTSD +	PE, SER, Both, No tx PE, CT, SSRI vs. placebo, waitlist with delayed PE
van den Hout et al. (2012)	12	26.58 (6.68; 19–37)	92	—	PTSD +	Recall, recall + EM, recall + tones
Chen et al. (2013)	200	37.4 (11.3)	75.5	34.5	PTSD +	PE, SER
Decker et al. (2013)	509	43.47 (8.32)	100	65.8	76% one + PTE	Exposure, Seeking Safety, and case management
Gilliam et al. (2013)	28	35.15 (9.95)	10.75	39.30	14.28% PTSD symptoms; 7.14% PTSD +	PE, SER, VRET, PSG
Harned et al. (2013)	42	34.0 (12.1; 19–57)	100	23.8	PTSD + and BPD +	PE, DBT, Both
Hughes et al. (2013)	107	49 (16.1)	100	56	55% w/probable PTSD	Insomnia related pharmacological or behavioral tx
Kracen et al. (2013) ^e	110	20-?	10.4	17.2	PTSD +	Individual, group, medication
Meis et al. (2013)	283	51.97 (13.41)	6.5	11.7	67% had probable diagnosis of PTSD	Partner involvement in PTSD tx
Reger et al. (2013)	174	28.53 (7.76)	17	—	—	PE, VRET, medication
Back et al. (2014)	35	39.4 (11.6)	5.7	51.4	PTSD + and SUD +	PTSD tx, SUD tx, Concurrent approach, No tx
Kaltman et al. (2014)	27	45.56 (9.19)	100	100	100% one + PTE	Supportive tx, CBT, relaxation, exercise/activation
Kehle-Forbes et al. (2014)	58	35.44 (7.54)	1.7	6.9	PTSD +	PE, SSRI, No tx
Le et al. (2014)	200	37.5 (11.3)	76	35	PTSD +	Randomized to choice (PE or SER) or no choice conditions

Note. BEP = brief eclectic psychotherapy; CBT = cognitive behavioral therapy; CISD = critical incident stress debriefing; CT = cognitive therapy; EMDR = eye movement desensitization and reprocessing; IE = imaginal exposure; PE = prolonged exposure; PTSD = posttraumatic stress disorder; PTE = potentially traumatic event; SSRI = selective serotonin reuptake inhibitor; SER = sertraline; SUD = substance abuse disorder; TFT = thought field therapy; Tx = treatment; VA = veterans affairs; VRE = virtual reality exposure.

^a Separate populations were compared in the same publication. ^b Findings duplicated and presented in Cochran, Pruitt, Fukuda, Zoellner, and Feeny (2008); Zoellner, Feeny, and Bittinger (2009). ^c Findings duplicated and presented in Zoellner, Feeny and Bittinger (2009). ^d Findings duplicated and presented in Angelo, Miller, Zoellner, and Feeny (2008); Zoellner, Feeny, and Bittinger (2009). ^e Participants were permitted to rank more than one treatment as most preferred.

participants with a dual diagnosis of substance abuse or addiction. Of studies that did not include PTSD as an inclusion criterion, the prevalence of PTSD ranged from 7% to 67%. Ten studies indicated that a portion of the participants had experienced a potentially traumatic event ($M = 72%$ [36–100%]). Twenty-three (57.5%) studies recruited treatment-seeking populations, of which 10 were veteran samples.

Preferences for multiple mental health treatment options were assessed including exposure-based therapies (e.g., PE; $n = 16$, 40%), medication (e.g., sertraline [SER]; $n = 24$, 60%), cognitive therapy (CT) or cognitive-behavioral therapy (CBT; $n = 12$, 30%) EMDR; $n = 4$, 10%). Twelve (30%) surveyed preferences and interests using self-report measures; 11 (27.5%) used a forced choice methodology (e.g., “If you had to choose, which would you pick?”); 9 (22.5%) used rank order (e.g., ordering treatments from most to least preferred); 6 (15%) used semistructured interviews; and 1 each (2.5%) used both forced choice and rank order. Of the qualitative studies, 2 (5%) asked generally about counseling and medication, and 4 (10%) studies inquired about preferences for particular psychosocial programming and intervention.

Quantitative Findings

Of the unique 19 quantitative studies (22 populations) that compared preference for medication versus psychotherapy, all but one (Epstein, Babcock-Parziale, Haynes, & Herb, 2012) indicated a preference for psychotherapy. This preference was usually strong, with seven studies indicating over 80% of their samples preferring psychotherapy versus a maximum of 36% preferring medication. In these same studies, participants were between 5 to 12 times more likely to prefer psychotherapy over medication, and two to three times more likely to choose medication over no treatment (Cochran et al., 2008; Feeny, Zoellner, & Kahana, 2009a). In contrast to studies where participants were asked to state their choice of treatment from the presented options, Shalev et al. (2012) used an equipoise design in which participants identified two treatments they were unwilling to engage in before randomization into a condition. In this study, medication was the most frequently declined treatment (42.6%). Indeed, even when given a repertoire of treatment options for PTSD, participants were nearly nine times more likely to choose psychological intervention (Becker et al., 2009) over psychopharmacology. In contrast, one

Table 2
Qualitative Trauma Treatment Preference Articles in Chronological Order

Study	<i>N</i>	Mean age (<i>SD</i> ; range)	% Female	% Non-White	Trauma type	Method of assessing preference
Christofides et al. (2006) ^a	275	14.4–66.6	100	—	100% sexual trauma	Asked what aspects of health services after rape that would be most valued
Hume & Platt (2007)	14	20–49	42	—	100% reported disrupted family life (e.g., death, divorce), 29% reported childhood abuse	Asked to identify their ideal tx including problem solving, CBT, medication, or 24-hr support information
Eisenman et al. (2008)	60	—	90	100	PTSD +	“What kind of help would you like to receive for your emotional distress?”
Fann et al. (2009)	145	42.4 (14.3)	5	10.3	26% had probable MDD	“In the future, if you were bothered by depression, loss of energy, or little interest in doing things, how likely would you take part in the following, if at no cost to you?”
Tan et al. (2011)	30	36 (13.1; 24–62)	0	60	66.7% PTSD +	Biofeedback, pharmacotherapy
Possemato et al. (in press)	18	—	22	17	Screen + for PTSD and SUD	Interest of content in a Web-based intervention for PTSD/SUD

Note. CBT = cognitive behavioral therapy; CD = compact disc; GAD = generalized anxiety disorder; MDD = major depressive disorder; PTSD = posttraumatic stress disorder; SUD = substance abuse disorder; Tx = treatment.

^a Participants were permitted to rank more than one treatment as most preferred.

study interviewing individuals immediately after trauma exposure found that while 76% were interested in counseling, 62% were interested in medication, and over half were interested in both (Roy-Byrne, Berliner, Russo, Zatzick, & Pitman, 2003).

Factors that appeared to result in increasing preference for medication were comorbid PTSD and insomnia (Epstein et al., 2012) and PTSD and depression (Zoellner et al., 2009). On the other hand, participants diagnosed primarily with PTSD showed greater preference for psychotherapy over medication (Becker et al., 2007, 2009). Predictors of interest in psychotherapy were perceived threat to life during the trauma, previous psychiatric history, female gender, and experience of sexual assault. Participants who sustained traumatic injuries were also more likely to prefer psychotherapy (Wong et al., 2007).

Participants in eight studies (Becker et al., 2009, 2007; Feeny et al., 2009a; Feeny, Zoellner, Mavissakalian, & Roy-Bryne, 2009b; Gilliam, Norberg, Ryan, & Tolin, 2013; Kehle-Forbes et al., 2014; Pruitt, Zoellner, Feeny, Caldwell, & Hanson, 2012; Zoellner et al., 2003) reported viewing PE more positively and with greater credibility than medication, and participants in four studies (Angelo et al., 2008; Chen, Keller, Zoellner, & Feeny, 2013; Cochran et al., 2008; Zoellner et al., 2003) cited “wanting to talk about their trauma” as their main reason for choosing PE. Treatment rationales containing information on the mechanisms and components of each treatment type consistently increased the credibility and personal response toward exposure-based therapies rather than medication, which was attributed to participants’ beliefs that talking about trauma was a key part of treatment (Feeny et al., 2009b; Kehle-Forbes et al., 2014; Pruitt et al., 2012). Further, preference for PE was positively impacted by participant testimonials, however the same was not found for SER. In fact, SER was perceived as carrying a greater stigma (Gilliam et al., 2013), lower perceived

credibility and positive outcome expectancy than psychological interventions (Pruitt et al., 2012). When participants rated pharmacological intervention higher than psychotherapy, this was typically because of practical considerations such as the more immediate effect on symptoms compared with psychotherapy (Cochran et al., 2008; Epstein et al., 2012) or having had previous experience with medication (Kehle-Forbes et al., 2014).

Preferences among cognitive therapies varied across studies. Specifically, when asked to rank order various psychotherapies, participants with PTSD were most likely to choose CBT or exposure-based therapies as their first choice over psychodynamic therapies or medication (Becker et al., 2007, 2009). More specifically in one study, participants expressed preference for CT over PE (Becker et al., 2009) and in another study reported a higher preference for PE over other CBT interventions (Becker et al., 2007). On the other hand, in a study of trauma-exposed women, supportive therapy was preferred over CBT (Kaltman, de Mendoza, Gonzalez, & Serrano, 2014). In two studies (Kracen, Mastnak, Loaiza, & Matthieu, 2013; Tarrier, Liversidge, & Gregg, 2006), group therapy was found to be less desirable than individual psychotherapy. This was most often attributed to discomfort in showing emotions in a group setting.

When given a choice between sequential or concurrent psychotherapy treatments, participants with comorbid psychiatric conditions (e.g., substance abuse, borderline personality disorder) identified a stronger preference for concurrent treatment approaches (Back et al., 2014; Back, Brady, Jaanimägi, & Jackson, 2006; Brown, Stout, & Gannon-Rowley, 1998; Harned, Tkachuck, & Youngberg, 2013; Najavits, Sullivan, Schmitz, Weiss, & Lee, 2004). This preference was largely because of participants’ beliefs that the two problems were interdependent (Back et al., 2006; Brown et al., 1998; Najavits et al., 2004).

Qualitative Findings

Similar to the quantitative studies, all of the qualitative studies that assessed preference for psychotherapy or medication ($n = 4$, 100%) indicated an overall preference for psychotherapy (Christofides, Muirhead, Jewkes, Penn-Kekana, & Conco, 2006; Eisenman et al., 2008; Fann et al., 2009; Tan, Dao, Farmer, Sutherland, & Gevirtz, 2011). Indeed, in samples of participants with PTSD, the majority expressed preference for psychotherapy whereas only a small percentage preferred medication (Eisenman et al., 2008; Tan et al., 2011). Further, in the immediate aftermath of a sexual assault, the majority of women were more interested in returning to treatment centers for counseling (Christofides et al., 2006) than receiving pharmacotherapy. Conversely, although their preference for psychotherapy was greater, participants with traumatic brain injuries and comorbid depression were more likely to state a willingness to use antidepressants compared with participants without comorbid depression (Fann et al., 2009).

Discussion

Findings from this systematic review of the empirical literature on preferences for trauma treatment indicate that there was a strong tendency to prefer psychotherapy over medication. This was true in both analog studies with varying degrees of traumatic exposure and related symptoms as well as for trauma patients. This is consistent with findings from a recent meta-analysis utilizing more than 90,000 participants, which indicated that roughly three-quarters preferred psychotherapy over medication for treatment of depression and/or anxiety disorders (McHugh, Whitton, Peckham, Welge, & Otto, 2013). Several reasons for this pattern are likely including participants' perspectives on psychotherapy's credibility (Feeny et al., 2009a), concerns regarding potential side effects (Chen et al., 2013), and stigma of taking a psychotropic medication (Reger et al., 2013). It appears, however, that a substantial minority prefer medication (Feeny et al., 2009b). This is a small minority appears to be relatively consistent across studies. Further, a small number of participants expressed no interest or preference in any of the treatment options presented to them. This is a reminder that "one size does not fit all."

A large portion of this research assessed participants' preferences for exposure therapy. This research indicates that many participants in the analog studies as well individuals with trauma histories or PTSD had strong preferences for exposure, particularly PE (the most frequently studied treatment identified in this review) over medication, and in a couple studies, over some other psychotherapies. However preference for PE is not absolute in that it was typically assessed relative to an antidepressant (e.g., SER). Thus, people may prefer PE over SER but might prefer a different type of psychotherapy over PE if given a choice.

Despite concerns by some mental health providers that trauma-focused treatments, such as PE, are too demanding or aversive to patients (e.g., Cook et al., 2014), a sizable group of participants in these studies indicate that they are willing to "brave" the challenges entailed in these treatments (Harned et al., 2013). Results presented here align with those from a study on group based exposure therapy where veterans expressed wanting to drop out, but chose to complete the full course (Mott et al., 2013). Not only do these concerns around the difficulty of trauma-focused treatments prevent some providers from using it, but it is possible that

those who do use these treatments modify them because of concerns around patient acceptability. Nonetheless, there does appear to be a subset of participants in these studies who do not prefer trauma-focused treatments, and who are also concerned about the potential demanding nature of these therapies.

The studies reviewed here also highlighted the importance of patient characteristics for preferences around treatment. For example, younger (vs. older) participants (Feeny et al., 2009b) appear to be more likely to have a preference for psychological treatments. As well, those with higher levels of education (Feeny et al., 2009b) and those whose trauma included sexual assault (Roy-Byrne et al., 2003) reported a stronger preference for psychotherapy. Finally, those who were actively seeking treatment had a stronger preference for psychotherapy than those identified as having trauma but not seeking treatment. It is likely that these different patient characteristics covary, and future research should do more to disentangle the dynamics among these variables.

These findings provide some suggestions for improving the care of trauma patients. When asked, participants appear to want a broader focus for treatment than solely PTSD symptom reduction. Specifically, in addition to psychotherapy, there appears to be an interest for clinical approaches that integrate the patient's family or partner (Meis et al., 2013). Finally, it is important to highlight that those with PTSD and comorbid disorders, such as substance use or borderline personality disorder also report an interest in treatment that addresses those comorbidities in addition to their PTSD (Brown et al., 1998; Harned et al., 2013; Najavits, 2011).

Limitations

Several limitations are important to note. First, the focus was on patient preferences per se, and not on other perceptions around treatment, such as perceived utility, acceptability, or satisfaction. There is some literature on these constructs that will need to be integrated with understanding the patient preferences. Second, the studies reviewed utilized different methods for measuring patient preference and how the information about different treatment options was presented likely impacted the findings. For example, some analog studies asked participants a variant of, "if this had happened to you, what would you do?" Assessing the preferences of participants actually seeking treatment may be different than asking hypothetical questions to people who have not experienced trauma, do not have associated mental health symptoms and are not seeking treatment. However, in some analog studies, when individuals with trauma and probable PTSD were identified and their preferences examined (e.g., Becker et al., 2009) their preferences did not appear to significantly differ from the rest of the sample.

Additionally, the group of individuals assessed in these studies is heterogeneous, including veterans, survivors of child abuse, conflict refugees, and victims of crime. Each of these subgroups of trauma survivors as well as others likely requires study. None of the samples were random and thus the results may not represent the larger population of trauma survivors. Research is clearly needed with clinical samples, diverse samples (e.g., ethnic minority, children, and older adults), with different symptom constellations (e.g., dissociation, self-injurious behaviors, suicidal ideation) as well as problems (e.g., homelessness, criminal justice system involvement).

Future Directions

Future research might include examination of preferences for treatment as well as determinants of those preferences. For example, variables such as gender, cultural norms (e.g., beliefs about medication and emotional expression), timing of trauma exposure and symptoms (recent trauma and onset of symptoms vs. distal experience of trauma and symptoms), type of trauma, and treatment goals and priorities (what problems patients hope to address when they enter treatment). Given the limited qualitative research available, future investigations of why patients prefer various treatments for trauma appear warranted. Additionally, examining potential changes in preferences over time, particularly after discussion of treatment options and previous treatment experiences, seems an important undertaking.

In some cases, studies only inquired about one type of therapy or one type of therapy compared with one type of medication. Future investigations should assess preferences among a range of psychotherapy options including but not limited to EBTs. For example it would be helpful to study not only participants' preference for treatment methods with specific, critical components but also their preference for the therapy relationship as well as other common factors (Laska, Gurman, & Wampold, 2014). Additionally, many of the studies assessed for preferences for PTSD treatment and preference for treatment of other trauma-related mental health problems (e.g., depression, dissociation) is warranted. Future investigations might also include reasons the individuals give for treatment preferences, including perceived efficacy and mechanism (Chen et al., 2013). Finally, there are likely important contributors of patient behavior and treatment-seeking beyond preferences, and preference for treatment does not necessarily motivate an individual to seek and engage in mental health care. Indeed, Mott et al. (2013) demonstrated the importance of obtaining information from patients following a course of treatment so as to understand factors that contribute to treatment drop-out and completion.

Conclusion

There are a host of clinical and practical implications of these findings. Given the variation in participant preferences and the evidence that such preferences are important for outcomes, it is important that the discussion of treatment options take place. Epstein and Peters (2009) provide a few suggestions for how providers can be balanced in their presentation of treatment options. They advise providers to develop a habit of reflective questioning including asking themselves if they framed the options from more than one perspective and have their thoughts and feelings informed and/or biased the patients preferences.

The fact that a majority of participants prefer psychotherapy is of only limited use in the face of a particular patient who has a strong preference for medication, but may not be well-informed about their options. The role of the provider in this context should include an attempt to provide information in a clear but low-pressure way that is respectful of the particular concerns of the particular patient. Further, individuals with PTSD likely vary in their readiness to address trauma-related problems. Providers and patients can use information about level of motivation to focus on goals the patient is most motivated to achieve. Preference as well

as motivation assessments may help to determine which patients are ready to engage in trauma-focused EBTs.

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