



**Evaluating Trauma Informed Care training for services supporting individuals experiencing homelessness and multiple disadvantage.**

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**Abstract:**

*Purpose* – Implementing trauma informed care (TIC) for individuals facing homelessness and multiple disadvantage is proposed to help both service users and staff work effectively and therapeutically together. However, the effectiveness of implementing TIC via training is debatable. This study explores the effects of a four-day trauma informed care and psychologically informed environments training package in such services.

*Design and methodology* – The analysis explores the effect of this training on the degree of trauma informed care as measured by the TICOMETER, a psychometrically robust organisational measure of TIC. The study examines group and individual level changes from before training and again at six-month and one-year follow-up time-points.

*Findings* – At the group level analysis, three of the five TICOMETER domains (*Knowledge & Skills, Relationships, and Policies & Procedures*) were higher when compared to pre-training scores. The remaining two domains (*Service Delivery and Respect*) did not improve. Individual level analysis showed some participants' scores decreased following training. Overall, the training appeared to modestly improve the degree of trauma informed care as measured by the TICOMETER, and these effects were sustained at one-year follow-up.

*Research limitations* – Findings are limited by the design and low response rates at follow-up.

*Originality* – This paper is the first UK study to use the TICOMETER.

*Practical implications* – Training is necessary but not sufficient for the implementation of TIC and needs to be complemented with wider organisational and system level changes.

**Keywords:** Trauma informed care, homelessness, multiple disadvantage, training, evaluation, implementation.

**Article classification:** Research paper (with practical focus)

## Introduction

Many factors contribute to a person experiencing homelessness. However, the presence of past and current trauma for those accessing social care providers is high (Yatchmenoff *et al.*, 2017) and both trauma, and responses to it, may take a causal role in the initiation and re-experiencing of homelessness (Bassuk *et al.*, 2001). Adverse Childhood Experiences (ACEs) have long been associated with difficulties in mental health, physical health, and wellbeing (Felitti *et al.*, 1998). Trauma experiences reportedly have a dose dependant relationship with the likelihood of homelessness (Bassuk *et al.*, 2001). Half of all people experiencing homelessness have experienced four or more ACEs (Bellis *et al.*, 2014) and higher ACE rates are associated with repeated homelessness (Bassuk *et al.*, 2001, Bellis *et al.*, 2014). Whilst trauma is a key factor in entering homelessness, homelessness services' programmes, processes, and settings can be traumatic in themselves (Coates and McKenzie-Mohr, 2010; Hopper *et al.*, 2010; Yatchmenoff *et al.*, 2017; Bloom and Farragher, 2011). Continuing trauma exists in the form of neglect, physical and psychological abuse, and community violence (Coates and McKenzie-Mohr, 2010). These stressors and ways of coping with them, such as substance misuse, compound and increase the difficulty in exiting homelessness (Bassuk *et al.*, 2001, Cockersell, 2018).

Trauma effects and potential coping strategies, in conjunction with trauma survivors' difficulties in forming trusting relationships and engagement with services, can result in multiple disadvantage (Fisher, 2015, Watson *et al.*, 2019). This complexity can lead to homelessness services feeling overwhelmed as they lack the resources to address barriers to sustained recovery (Hopper *et al.*, 2010). However, such services are in a unique position to provide lasting change to an often-overlooked group – supporting the healing from trauma, establishing relationships, and developing connections in the community (Hopper *et al.*, 2010).

Homeless Link (2017) and European Federation of National Organisations working with the Homeless (2017) published briefings on Psychologically Informed Environments (PIE) and Trauma Informed Care (TIC). PIE is an overarching framework wherein services are supported to develop psychologically informed practice and service design (Keats *et al.*, 2012) but does not require an explicit focus on trauma, as is the case with the complementary TIC framework. TIC has been a growing paradigm across educational (e.g. Thomas *et al.*, 2019), mental health (e.g. Oral *et al.*, 2016), substance misuse (Rosenberg, 2011, Covington, 2008), and criminal justice systems (e.g. Miller and Najavits, 2012). Good practice guidelines recommend the implementation of TIC and training of psychological concepts to support staff (Homeless Link, 2017, Pathway, 2012). Wider organisational training is recommended to support a general knowledge instead of a few specialist 'champions' (Harris and Fallot, 2001).

There are multiple, though overlapping, definitions and operationalisations of TIC (Hopper *et al.*, 2010, Yatchmenoff *et al.*, 2017). The Homeless Link utilises the definition set forth by Substance Misuse and Mental Health Authority and the National Centre for Trauma Informed Care (USA), which has four components: i)

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3 acknowledge the impact of trauma and recovery, ii) identify trauma signs and  
4 symptoms, iii) use knowledge of trauma to improve practice, and iv) avoid and  
5 prevent re-traumatisation.  
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8 Arguably, the implementation of TIC would lead to improved outcomes; yet, in  
9 contrast with apparently broad uptake of the approach, there is little empirical  
10 evidence that its implementation improves outcomes (Purtle, 2018, Unick *et al.*,  
11 2019). Prestidge's (2014) observations of a TIC approach being implemented across  
12 outreach, housing, and support services, reported improved relationships with  
13 service users, an increase in the service efficacy, and service users moving towards  
14 independence at a greater speed. Furthermore, staff reported greater acceptance of  
15 service users and decreased reliance on managers (Prestidge, 2014); it should be  
16 noted that these statements originate from observations and anecdotal evidence.  
17 Arguably, 'organisations need psychometrically sound tools to measure the extent to  
18 which they are trauma informed, to identify strengths and needs, and to monitor  
19 progress toward improvement (Champine *et al.*, 2019, p.420).  
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23 TIC is a complex framework which has been difficult to adopt and implement  
24 effectively. One reasonable method of initiating TIC is through training but, due to  
25 mixed quality of research and assessment of outcomes, the suitability of such  
26 training is questionable. Furthermore, the ability of staff training to establish wider  
27 and enduring systemic culture changes is debatable (Purtle, 2018, Yatchmenoff *et al.*,  
28 2017). Purtle (2018) reports great variation in the duration of training (a single  
29 hour to multiple days), and issues in measurement, analysis, and experimental  
30 design – questioning the quality of research and training offered. A recent systematic  
31 review of TIC measures cited concerns over 'train-to-test' training and measurement  
32 pairings and measures investigating single or partial TIC components (Champine *et al.*,  
33 2019). TIC measures can examine relational, organisational implementation, and  
34 service delivery aspects of TIC (Champine *et al.*, 2019). The TICOMETER  
35 ([www.ticometer.com](http://www.ticometer.com)) is a brief TIC measure that can be used in organisations  
36 wanting to assess their TIC levels, identifying areas for future training, and tracking  
37 their changes over time (Bassuk *et al.*, 2017).  
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42 In response to drivers for TIC, a large Midlands (UK) provider of services for people  
43 experiencing homelessness employed two clinical psychologists to develop  
44 psychologically- and trauma-informed practice, with a particular focus on the teams  
45 working with individuals facing multiple disadvantage (homelessness, substance  
46 misuse, mental health problems, and current or historical offending) (Fulfilling Lives,  
47 2019). Part of their role was the delivery of training in TIC to staff.  
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### 50 **Aims**

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52 This study aims to evaluate a TIC training programme for staff working with  
53 individuals facing multiple disadvantages by:

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55 1. Examining whether the training has affected organisational ratings of TIC as  
56 measured by the TICOMETER and whether any changes were sustained at  
57 follow-up at a group and individual level.  
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2. Examining if there were any factors influencing degree of change in TIC as measured by the TICOMETER.

## **Methodology**

As an evaluation of a planned organisational development, rather than an intervention undertaken for the purposes of research, ethical approval was not sought. The evaluation was approved by the organisation and undertaken within ethical principles, e.g., information about the evaluation was provided to support informed consent and staff were clearly instructed that participation was voluntary and anonymous.

## **Participants**

Seven services within the same organisation took part in the training. The services included a community based 'Fulfilling Lives' project, Opportunity Nottingham; three 15-bed staffed hostels for individuals with complex needs aged 18 and over (one for men, one for women, and one mixed gender); and three 'transitions' services for young people aged 16 – 24, with between 17 and 37 beds. The transitions services comprised a mixture of staffed 'core' accommodation services and unstaffed step-down services with in-reach support, as well as 4 individual tenancies with provision of tenancy support. Participants' job roles included support workers, support planners, deputy managers and managers of each service, and operational managers who oversee multiple services.

## **Training**

The training focused on the concepts of PIE and TIC. This training was delivered over four days and delivered by two clinical psychologists, a social worker, and a cognitive-behavioural therapist employed by the organisation as a Wellbeing Practitioner. Day one and two focused on PIE, whilst days three and four focused on TIC. Day three addressed topics such as: the need for trauma informed care and adverse childhood experiences; the impact of trauma on the brain; promoting recovery from trauma; and service trauma-informed responses. Day four addressed topics such as: service responses to trauma and gender-responsive services; vicarious trauma, prevention, and responses; and strengths-based approaches and trauma informed risk / safety planning.

## Measures

The TICOMETER is comprised of 35 items across 5 domains: build trauma-informed knowledge and skills (Knowledge & Skills – 5 items), establish trusting relationships (Relationships – 8 items), respect service users (Respect – 6 items), foster trauma-informed service delivery (Service Delivery – 10 items), and promote trauma-informed procedures and policies (Procedures & Policies – 6 items). Sample items for each domain are shown in Bassuk et al. (2017). TICOMETER psychometric properties and scoring profiles are shown in Table I.

Table I approximately here

## Procedure

Participants were asked to complete the TICOMETER before the training started (pre-training). Due to the number of participants to complete training, they were divided into three groups, with mixed staff from across the services in each so that learning could be shared. The training was repeated three times so that each group received the four-day training on PIE and TIC. Participants were then asked to complete the TICOMETER again six months after the pre-training measure (post-training), and again one year after the pre-training baseline (follow-up).

## Analysis

The effect of pre-training baseline scores on response rate over the three time-points (pre-, post-training, and follow-up) was analysed using a one-way Analysis of Variance (ANOVA), with post-hoc Tukey's HSD pairwise comparisons.

Differences in mean scores between the three time-points were tested via paired sample t-tests. Effect sizes are reported using Cohen's  $d_{rm}$  and Common Language effect size (Cohen, 2013, Lakens, 2013, McGraw and Wong, 1992).

Changes on an individual level were calculated using the Reliable Change Index (RCI; Jacobson and Truax, 1991). Pearson's  $r$  correlations were used to explore the potential relationship between pre-training scores and change in scores over training for each domain.

## Results

### Descriptive statistics

In total, 88 participants completed at least one time-point measurement of the TICOMETER. There were differences in the number of participants responding at each of the time-points with 80 responses for baseline, 18 responses for post-training, and 26 responses for follow-up. Within these responses: 9 participants completed all three time-points, 9 completed pre- and post-training, 9 completed pre-

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3 training and follow-up, 53 completed pre-training only, and 8 completed follow-up  
4 only. Descriptive statistics are shown in Table II.  
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### 10 **Analysis of Variance**

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12 ANOVA showed a significant effect of response group on pre-training  
13 *Knowledge & Skills* scores,  $F_{2,77} = 3.24$ ,  $p = .045$ ,  $\eta_p^2 = .078$ . Post-hoc pairwise  
14 comparisons using the Tukey HSD test indicated that the *Knowledge & Skills* mean  
15 scores for the pre- and post-training/follow-up group ( $M = 10.78$ ,  $SD = 2.56$ ) were  
16 significantly different to the pre-training only group ( $M = 12.36$ ,  $SD = 2.25$ ,  $p = .049$ ).  
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19 ANOVA showed no significant effect of response group on pre-training scores for:  
20 *Relationships* ( $F_{2,77} = .58$ ,  $p = .56$ ); *Respect* ( $F_{2,77} = 2.61$ ,  $p = .080$ ); *Service Delivery*  
21 ( $F_{2,77} = .32$ ,  $p = .73$ ); or *Policies & Procedure* ( $F_{2,77} = .93$ ,  $p = .40$ ) scores.  
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### 26 **Group and individual level differences**

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28 Standard deviations for each domain were calculated from pre-training scores  
29 ( $n = 80$ ). Test-retest reliability was taken from the TICOMETER's psychometrics  
30 properties report (Bassuk *et al.*, 2017). RCI scores and data are shown in Table III.  
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38 Paired sample t-tests were performed comparing scores changes across all domains  
39 for pre- and post-training ( $n = 18$  [Table IV]), pre-training and follow-up ( $n = 18$  [Table  
40 V]), and post-training and follow-Up ( $n = 9$  [Table VI]). Proportions of reliable  
41 changes are shown in Table VII.  
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### 50 **Knowledge & Skills**

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52 The post-training *Knowledge & Skills* scores were significantly higher than  
53 pre-training scores with a medium effect size. After controlling for individual  
54 differences, the Common Language effect size indicates that the likelihood a person  
55 scores higher for post-training than pre-training is 87%. Eleven percent ( $n = 2$ ) of  
56 participants had a positive reliable change and no negative reliable changes.  
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3 The follow-up *Knowledge & Skills* scores were significantly higher than pre-training  
4 scores with a large effect size. The likelihood a person scores higher for follow-up  
5 than pre-training is 86%. Twenty-eight percent ( $n = 5$ ) of participants had a positive  
6 reliable change and no negative reliable changes.  
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9 The follow-up *Knowledge & Skills* scores were not significantly different to the post-  
10 training scores with a small effect size. The likelihood a person scores higher for  
11 follow-up than post-training is 61%. No participants had a reliable positive or  
12 negative change.  
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### 14 *Relationships*

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16 The post-training *Relationships* scores were significantly higher than pre-  
17 training scores with a medium effect size. The likelihood a person scores higher for  
18 post-training than pre-training is 70%. Twenty-eight percent ( $n = 5$ ) of participants  
19 had a positive reliable change and 6% ( $n = 1$ ) had a negative reliable change.  
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22 The follow-up *Relationships* scores were significantly higher than pre-training scores  
23 with a medium effect size. The likelihood a person scores higher for follow-up than  
24 pre-training is 75%. Twenty-two percent ( $n = 4$ ) of participants had a positive reliable  
25 change and 6% ( $n = 1$ ) had a negative reliable change.  
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28 The follow-up *Relationships* scores were not significantly different to the post-training  
29 scores. The likelihood a person scores higher for follow-up than post-training is 50%.  
30 No participants had a reliable positive or negative change.  
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### 32 *Respect*

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34 The post-training *Respect* scores were not significantly different to the pre-  
35 training scores with a medium effect size. The likelihood a person scores higher for  
36 post-training than pre-training is 66%. Seventeen percent ( $n = 3$ ) of participants had  
37 a positive reliable change and 11% ( $n = 2$ ) had a negative reliable change.  
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40 The follow-up *Respect* scores were not significantly different to the pre-training  
41 scores with a medium effect size. The likelihood a person scores higher for follow-up  
42 than pre-training is 69%. Seventeen percent ( $n = 3$ ) of participants had a positive  
43 reliable change and 6% ( $n = 1$ ) had a negative reliable change.  
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46 The follow-up *Respect* scores were not significantly different to the post-training  
47 scores with a small effect size. The likelihood a person scores higher for follow-up  
48 than post-training is 69%. No participants had a reliable positive or negative change.  
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### 50 *Service Delivery*

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52 The post-training *Service Delivery* scores were not significantly different to the  
53 pre-training scores. The likelihood a person scores higher for post-training than pre-  
54 training is 56%. Twenty-eight percent ( $n = 5$ ) of participants had a positive reliable  
55 change and 17% ( $n = 3$ ) had a negative reliable change.  
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58 The follow-up *Service Delivery* scores were not significantly different to the pre-  
59 training scores with a medium effect size. The likelihood a person scores higher for  
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3 follow-up than pre-training is 68%. Fifty percent ( $n = 9$ ) of participants had a positive  
4 reliable change and 11% ( $n = 2$ ) had a negative reliable change.  
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6 The follow-up *Service Delivery* scores were not significantly different to the post-  
7 training scores. The likelihood a person scores higher for follow-up than post-training  
8 is .53%. No participants had a reliable positive or negative change.  
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### 10 *Policies & procedures*

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12 The post-training *Policies & Procedures* scores were significantly higher than  
13 pre-training scores with a medium effect size. The likelihood a person scores higher  
14 for post-training than pre-training is 72%. Twenty-two percent ( $n = 4$ ) of participants  
15 had a positive reliable change and no negative reliable changes.  
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18 The follow-up *Policies & Procedures* scores were significantly higher than pre-  
19 training scores with a large effect size. The likelihood a person scores higher for  
20 follow-up than pre-training is 83%. Twenty-eight percent ( $n = 5$ ) of participants had a  
21 positive reliable change and no negative reliable changes.  
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24 The follow-up *Policies & Procedures* scores were not significantly different to the  
25 post-training scores. The likelihood a person scores higher for follow-up than post-  
26 training is 57%. No participants had a reliable positive or negative change.  
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30 **Table VII approximately here**  
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### 34 *Scoring classification*

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36 Individual scores were categorised using classifications shown in Table I  
37 (*Methodology*). The number and percentage of participants in each scoring category,  
38 and the average category for that time-point is shown in Table VIII.  
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### 46 *Correlations*

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48 Pre-training scores were negatively correlated with their respective domain's  
49 change in score, i.e., the higher an individual's baseline score, the less likely their  
50 score would change positively: *Knowledge & Skills*,  $r = -.71$ ,  $p < .001$ ; *Relationships*,  
51  $r = -.82$ ,  $p < .001$ ; *Respect*,  $r = -.66$ ,  $p = .003$ ; *Service Delivery*,  $r = -.62$ ,  $p = .006$ ; and  
52 *Policies & Procedure*,  $r = -.62$ ,  $p = .006$ . Results are represented in Figure I.  
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### Discussion

This evaluation examined whether TIC training for staff affected organisational ratings of TIC as measured by the TICOMETER and any factors influencing the degree of change measured.

ANOVA results suggest baseline scores did not influence response rates. However, a moderate effect was reported for baseline *Knowledge & Skills* scores. Consequently, the effect of baseline scores on measurement completion is debatable. Job roles would have been a more prudent variable to have included as one of the few individual factors that can impact TICOMETER scores, with managerial and supervisor roles rating TIC higher than more frontline staff (Unick et al., 2019). However, job roles are not captured by the TICOMETER, which provides organisation-wide aggregated scores and / or anonymous scores for comparison.

At the group level, although there were statistically significant improvements in three TICOMETER domains, the degree of change was modest in the majority of comparisons with only two domains reaching a large effect size from pre-training to follow-up: *Knowledge & Skills* and *Policies & Procedures*. There were no group level changes in any domain for the post-training to follow-up comparison, suggesting the effect of training is sustained at the one-year follow up point.

The results indicate training is not sufficient to change respect for service users or service delivery, as measured by the TICOMETER, which may require wider cultural changes to achieve. A key component of TIC is the recognition of vicarious trauma that staff may have experienced (Bloom, 2006). For learning to be integrated, levels of mistrust and resistance to change originating from previous organisational practices must be worked through (Bloom, 2006, Unick et al., 2019). The TICOMETER does not provide a way to capture such factors; using it alongside methodologies that could achieve this may be useful, although social desirability and issues of power within the organisation may limit participant openness about such factors.

For *Service Delivery* and *Respect* domains, whilst no group changes were observed, a high proportion of positive individual changes were reported (17 – 50%). Yet these two domains also reported the highest proportions of negative changes (6 – 17%), perhaps highlighting complications in the consistent measurement of these domains. However, Bassuk et al. (2017) report a robust test-retest reliability for these domains. Individual differences may account for this effect – contrasting with Unick et al.'s (2019) reporting of the limited impact of individual factors on TICOMETER outcomes. The individual changes were mostly comparable to the group level analysis, except the latter neglecting the degree of negative changes that occurred.

Strong negative relationships ( $r = -0.62 - 0.82$ ) between pre-training scores and change in scores for each respective domain could be explained by participants responding differently in the context of new knowledge and skills relating to

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3 delivering TIC or, perhaps more simply, by regression toward the mean. Statistically,  
4 it is expected that extreme values will move closer towards the mean with repeated  
5 measurement; whilst this could account for the reduction in scores over training, it  
6 can similarly be applied to lower scores increasing (Stigler, 1997).  
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9 Overall, the average TICOMETER classifications scores moved from “Insufficient” to  
10 “Fair/Needs Improvement”. Whilst these findings support the use of TIC training, we  
11 must also consider the moderate degree of change observed and what may be  
12 limiting TIC implementation. This is vital given the huge investment of time, which  
13 amounted to 368 working days given 92 staff (including trainers) attending the four-  
14 day training programme. Agency factors have been shown to impact TIC scores to a  
15 greater degree than individual factors (Unick *et al.*, 2019). Moreover, services  
16 working with those facing multiple disadvantage had the lowest TIC scores (Unick *et*  
17 *al.*, 2019). These services reportedly have comparatively limited resources, less  
18 training, more issues with staffing, and increased stigma than other services  
19 implementing TIC, such as mental health (Mullen and Leginski, 2010, Olivet *et al.*,  
20 2010). Additionally, other agency factors such as the recency of previous trauma  
21 training and the involvement of service users in the TIC assessment and training,  
22 also played a key role in TIC uptake (Unick *et al.*, 2019).  
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27 The findings indicate issues with the wider system and culture within services being  
28 the moderating factor for TIC uptake, rather than individual staff. However, training is  
29 still needed for *all* staff to help in the adoption of these changes (Harris and Fallot,  
30 2001): it may be seen as necessary, but not sufficient, for the implementation of TIC.  
31 It is therefore important that organisations do not simply see provision of training to  
32 staff (even at all levels) as indicative of becoming ‘trauma informed’. While training  
33 may lead to staff being informed about trauma, it does not mean that subsequent  
34 care or support provided is influenced by that information. Consideration needs to be  
35 given to both assessing and addressing other factors that might limit the  
36 development of trauma informed organisational culture.  
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## 42 **Limitations and Recommendations**

43 A key limitation of the design is that it is an evaluation of a service  
44 development, rather than specifically designed research that might have afforded the  
45 use of a control group of equivalent services not receiving training. This reflects the  
46 limitations of similar evaluations (Purtle, 2018) but also the realities of resourcing in  
47 homelessness services. Research projects examining the implementation of TIC  
48 may benefit from the use of control groups, as well as measures of subsequent staff  
49 behavioural change, improvement in service delivery and outcomes for clients.  
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53 Whilst minimal differences were observed between the levels of response, the  
54 lack of responses at the follow-up timepoints limit the power and generalisability of  
55 the results to the involved services. Unick *et al.* (2019) report the importance of  
56 including service users not only in the training, but also in the evaluation of TIC. It  
57 would be prudent for future studies to incorporate service users more in both  
58 components – potentially improving the effectiveness of training and contextualising  
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3 outcome results with data from those who are meant to ultimately benefit from the  
4 implementation of TIC.  
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## 6 **Conclusion**

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8 TIC training has a beneficial effect on some, but not all, components of TIC. It is a  
9 necessary foundation, but not sufficient to truly embed a culture of TIC. Training  
10 needs to be complemented by a culture shift supported not only by changes in policy  
11 for organisations and systems but also service commissioning - services can only do  
12 so much within the constraints in which they operate. A dilemma to consider is the  
13 ordering of intervention: does training promote the beginnings of a culture shift, or  
14 does this shift need to be initiated prior to training to gain the most from it?  
15 Continuing measurement of organisational TIC through measures such as the  
16 TICOMETER may help in addressing such a question and consequently improve the  
17 adoption of TIC.  
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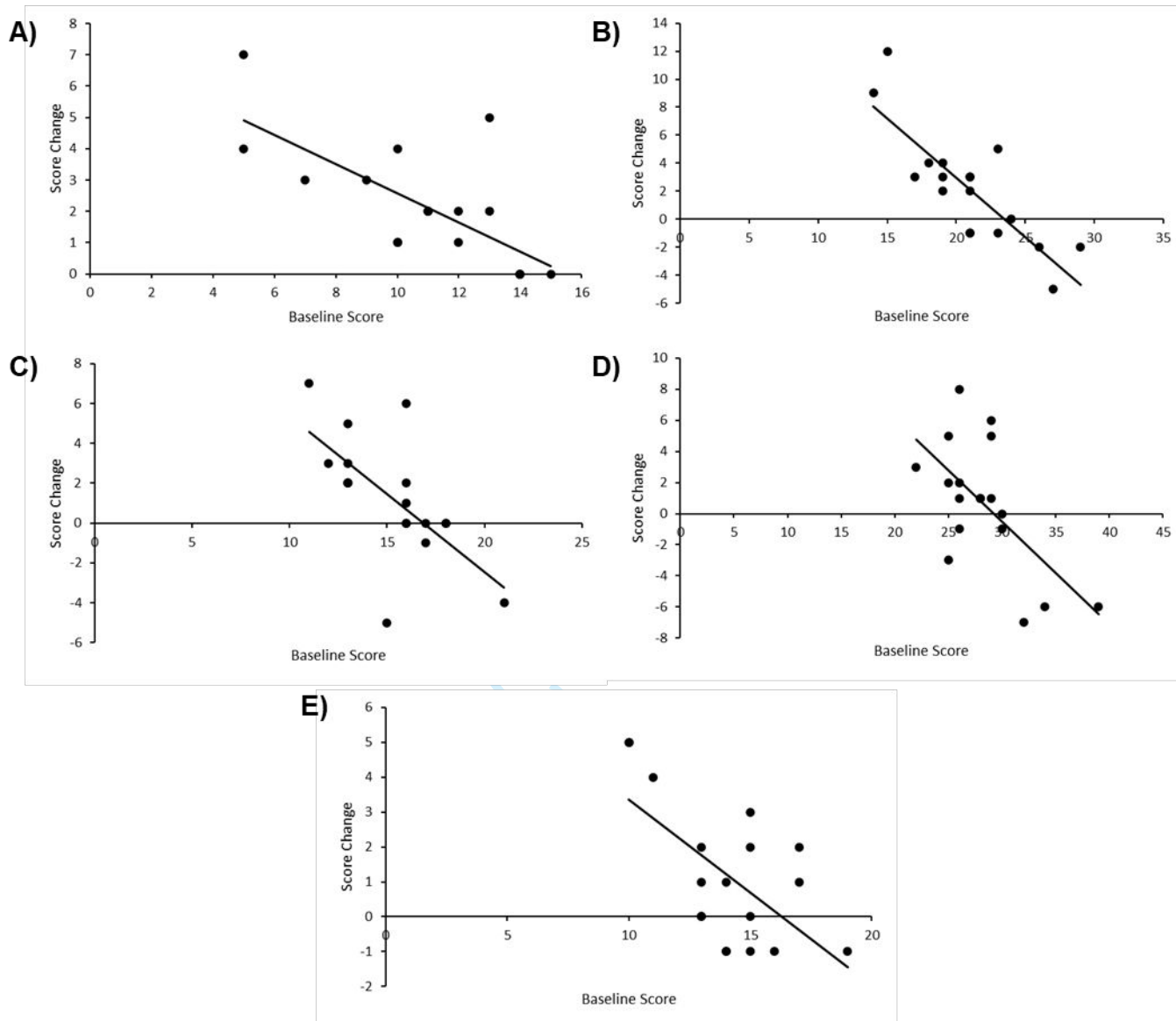
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**Figure I:** Scatter plot of Pearson  $r$  correlations between pre-training scores and change in domain score. Line of best fit shown. A) Knowledge & Skills; B) Relationships; C) Respect; D) Service Delivery; E) Policies & Procedures

**Table I:** Scoring, test-retest reliability, and internal consistency of each domain and all five domains combined.

Domain		Scoring Category				<i>Test-retest (r)</i>	<i>Cronbach's alpha</i>
		Excellent	Good	Fair/Needs Improvement	Insufficient		
<i>Knowledge &amp; Skills</i>	5 items, 20 total points	18-20	16-17	14-15	1-13	.66	.82
<i>Relationships</i>	8 items, 32 total points	30-32	27-29	24-26	1-23	.90	.73
<i>Respect</i>	6 items, 24 total points	21-24	18-20	16-18	1-15	.80	.86
<i>Service Delivery</i>	10 items, 40 total points	38-40	34-37	30-33	1-29	.95	.86
<i>Policies &amp; Procedure</i>	6 items, 24 total points	21-24	19-20	16-18	1-15	.89	.78
<i>All 5 domains</i>						.90	.92

**Table II:** Descriptive statistics of TICOMETER scores across the three time-points.

Domain	Pre-Training		Post-training		Follow-Up	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
<i>Knowledge &amp; Skills</i>	80	11.88 (2.45)	18	13.06 (2.07)	26	14.19 (2.35)
<i>Relationships</i>	80	21.60 (3.51)	18	23.11 (2.38)	26	24.27 (2.95)
<i>Respect</i>	80	16.15 (2.57)	18	16.50 (2.34)	26	17.19 (2.26)
<i>Service Delivery</i>	80	28.35 (3.43)	18	28.89 (3.53)	26	30.38 (2.95)
<i>Policies &amp; Procedure</i>	80	14.56 (2.69)	18	15.28 (1.93)	26	16.50 (2.21)

**Note:** *n* – number of participants; *SD* – standard deviation

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**Table III:** RCI calculation data and results for each domain.

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Domain	<i>SD</i>	<i>r</i>	<i>RCrit</i>
<i>Knowledge &amp; Skills</i>	2.49	.66	5
<i>Relationships</i>	3.51	.90	4
<i>Respect</i>	2.57	.80	4
<i>Service Delivery</i>	3.43	.95	3
<i>Policies &amp; Procedures</i>	2.69	.89	3

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**N.B.** SD – standard deviation; *r* = test-retest reliability (ref). *RCrit* – Reliable change criterion.

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**Table IV:** Paired sample t-test for pre- post-training comparison.

Domain	<i>n</i>	Pre- Training	Post-Training	<i>r</i>	<i>t</i> (17)	<i>p</i>	<i>CI</i> (95%)	<i>d<sub>rm</sub></i>	<i>CL</i>
		<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )						
<i>Knowledge &amp; Skills</i>	18	10.89 (2.95)	13.06 (2.07)	.76	4.80	<b>&lt;.001</b>	1.22, 3.12	.78	.87
<i>Relationships</i>	18	21.00 (3.94)	23.11 (2.37)	.25	2.20	<b>.042</b>	0.09, 4.13	.64	.70
<i>Respect</i>	18	15.22 (2.56)	16.50 (2.36)	.23	1.78	.093	-0.24, 2.80	.52	.66
<i>Service Delivery</i>	18	28.28 (3.92)	28.89 (3.53)	.38	.62	.54	-1.47, 2.69	.16	.56
<i>Policies &amp; Procedure</i>	18	14.11 (2.37)	15.28 (1.93)	.57	2.44	<b>.026</b>	0.16, 2.18	.53	.72

**Note:** *n* – number of participants; *M* – mean; *SD* – standard deviation; *r* – Pearson’s *r*; *t* – *t* statistic; *p* – probability statistic; *CI* – Confidence Intervals;

*d<sub>rm</sub>* – Cohen’s *d* repeated measures; *CL* – Common Language effect size. Bold Denotes significance level less than .05.

**Table V:** Paired sample t-test for pre-training follow-up comparison.

Domain	<i>n</i>	Pre-Training	Follow-Up	<i>r</i>	<i>t</i> (17)	<i>p</i>	<i>CI</i> (95%)	<i>d<sub>rm</sub></i>	<i>CL</i>
		<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )						
<i>Knowledge &amp; Skills</i>	18	11.11 (2.61)	13.67 (2.11)	.5 2	4.61	<b>&lt;.001</b>	1.39, 3.73	1.07	.86
<i>Relationships</i>	18	21.39 (3.35)	23.44 (2.31)	.4 7	2.86	<b>.011</b>	0.84, 3.26	.69	.75
<i>Respect</i>	18	15.11 (2.22)	16.50 (1.76)	.0 2	2.10	.051	-0.01, 2.79	.69	.69
<i>Service Delivery</i>	18	28.06 (3.24)	29.78 (2.62)	.2 0	0.95	.068	-0.14, 3.56	.58	.68
<i>Policies &amp; Procedure</i>	18	14.17 (2.26)	16.06 (1.63)	.5 1	4.01	<b>&lt;.001</b>	0.90, 2.88	.93	.83

**Note:** *n* – number of participants; *M* – mean; *SD* – standard deviation; *r* – Pearson’s *r*; *t* – *t* statistic; *p* – probability statistic; *CI* – Confidence Intervals; *d<sub>rm</sub>* – Cohen’s *d* repeated measures; *CL* – Common Language effect size. Bold Denotes significance level less than .05.

**Table VI:** Paired sample t-test for post-training follow-up comparison.

Domain	<i>n</i>	Post-training	Follow-Up	<i>r</i>	<i>t</i> (7)	<i>p</i>	<i>CI</i> (95%)	<i>d<sub>rm</sub></i>	<i>CL</i>
		<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )						
<i>Knowledge &amp; Skills</i>	9	13.11 (1.27)	13.67 (2.18)	.47	.86	.41	-0.93, 2.05	.30	.61
<i>Relationships</i>	9	23.67 (2.29)	23.67 (2.06)	.69	.00	1.00	-1.33, 1.33	.00	.50
<i>Respect</i>	9	16.78 (1.30)	16.44 (1.33)	.86	1.41	.19	-0.20, 0.88	.26	.69
<i>Service Delivery</i>	9	29.78 (2.39)	29.89 (2.15)	.73	.19	.85	-1.19, 1.41	.05	.53
<i>Policies &amp; Procedure</i>	9	15.89 (1.96)	16.11 (1.17)	.82	.55	.60	-0.70, 1.14	.11	.57

**Note:** *n* – number of participants; *M* – mean; *SD* – standard deviation; *r* – Pearson’s *r*; *t* – *t* statistic; *p* – probability statistic; *CI* – Confidence Intervals; *d<sub>rm</sub>* – Cohen’s *d* repeated measures; *CL* – Common Language effect size. Bold Denotes significance level less than .05.

**Table VII:** Numbers and percentages of reliable changes across each domain and time-point.

		Comparison					
		Pre-Post (n = 18)		Pre-Follow-Up (n = 18)		Post-Follow-Up (n = 9)	
Domain		+ve	-ve	+ve	-ve	+ve	-ve
<i>Knowledge &amp; Skills</i>	% (n)	11 (2)	0 (0)	28 (5)	0 (0)	0 (0)	0 (0)
<i>Relationships</i>	% (n)	28 (5)	6 (1)	22 (4)	6 (1)	0 (0)	0 (0)
<i>Respect</i>	% (n)	17 (3)	11 (2)	17 (3)	6 (1)	0 (0)	0 (0)
<i>Service Delivery</i>	% (n)	28 (5)	17 (3)	50 (9)	11 (2)	0 (0)	0 (0)
<i>Policies &amp; Procedures</i>	% (n)	22 (4)	0 (0)	28 (5)	0 (0)	0 (0)	0 (0)

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**Table VIII:** Individual and group level scoring categories and percentages.

Time-Point and Domain	Scoring Category % (n)				Time-Point Average
	Insufficient	Fair / Needs Improvement	Good	Excellent	
<b>Pre-Training (n = 80)</b>					
<i>Knowledge &amp; Skills</i>	72.50 (58)	23.75 (19)	3.75 (3)	0.00 (0)	Insufficient
<i>Relationships</i>	37.50 (30)	16.25 (13)	6.25 (5)	2.50 (2)	Insufficient
<i>Respect</i>	40.00 (32)	30.00 (24)	23.75 (19)	6.25 (5)	Fair
<i>Service Delivery</i>	71.25 (57)	21.25 (17)	6.25 (5)	1.25 (1)	Insufficient
<i>Policies &amp; Procedures</i>	67.5 (54)	28.75 (23)	2.5 (2)	1.25 (1)	Insufficient
<b>Post-Training (n = 18)</b>					
<i>Knowledge &amp; Skills</i>	55.56 (10)	38.89 (7)	0.00 (0)	5.56 (1)	Insufficient
<i>Relationships</i>	61.11 (11)	22.22 (4)	16.67 (3)	0.00 (0)	Insufficient
<i>Respect</i>	27.78 (5)	38.89 (7)	27.78 (5)	5.56 (1)	Fair

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4	<i>Service Delivery</i>	61.11 (11)	22.22 (4)	16.67 (3)	0.00 (0)	Insufficient
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6	<i>Policies &amp; Procedures</i>	72.22 (13)	22.22 (4)	5.56 (1)	0.00 (0)	Insufficient
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10	Follow-Up (n = 26)					
11						
12	<i>Knowledge &amp; Skills</i>	34.62 (9)	46.15 (12)	7.69 (2)	11.54 (3)	Fair
13						
14	<i>Relationships</i>	34.62 (9)	50.00 (13)	7.69 (2)	7.69 (2)	Fair
15						
16						
17	<i>Respect</i>	26.92 (7)	26.92 (7)	38.46 (10)	7.69 (2)	Fair
18						
19						
20	<i>Service Delivery</i>	34.62 (9)	53.85 (14)	11.54 (3)	0.00 (0)	Fair
21						
22	<i>Policies &amp; Procedures</i>	34.62 (9)	53.85 (14)	7.69 (2)	3.85 (1)	Fair
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