TREE: Reducing the Use of REstrictive Practices on Psychiatric Wards through Virtual REality Immersive Technology Training

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Article

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Abstract: BACKGROUND: Restrictive practices are defined by measures linked to physical and chemical restraints to reduce the movement or control behaviours during any emergency. Seclusion is an equal part of restrictive practices intended to isolate and reduce the sensory stimulation to safeguard the patient and those within the vicinity. Using interventions by way of virtual reality (VR) could assist with reducing the need for restrictive practices as it could help reduce anxiety or agitation by way of placing users into realistic and immersive environments. This could also aid staff to and change current restrictive practices. AIM: To assess the feasibility and effectiveness of using a VR platform to provide reduction in restrictive practice (RRP) training. METHODS: The study received ethics approval was obtained prior to starting the study from the Health Research Authority in United Kingdom (22/HRA/3030 REFERENCE). A randomised controlled feasibility study was conducted alongside of an evaluation at at 1 month and 6 within inpatient psychiatric wards at Southern Health NHS Foundation Trust, UK**.** Virti Virtual Reality scenarios will be used on VR headsets to provide training on reducing restrictive practices in 3 inpatient psychiatric wards. Outcome measures included General Self-Efficacy (GSE) scale, Generalised Anxiety Disorder Assessment 7 (GAD-7), Burnout Assessment Tool (BAT-12), The Everyday Discrimination (EDS) Scale, and the Compassionate Engagement and Action (CEA) Scale. RESULTS: The statistical significance of most variables is high, with the exception of the BAT12 score, compassionate engagement to others score, compassionate to others total score, compassionate engagement from others score, and compassionate from others total score, which exhibit lower statistical power in two-sample t-tests. To assess the acceptability, preference, and adherence of users to the Virti VR technology for RRP training, we calculated the System Usability Scale (SUS) scores and visualized the program's completion using pie charts. The majority of respondents reported SUS scores exceeding 70, with a mean SUS score of 71.79. In accordance with the insights provided by Bangor et al. (38), the VR platform demonstrated superior usability compared to approximately 62% of other products. we utilized the GAD7 score to assess the confidence levels within the two groups. We compared the data for the VR group and the control group after one month, as well as the baseline and one-month data for both the VR group and the control group. Given that the p-values are below 0.05 and the statistical power is high, it can be concluded that there are no statistically significant differences in confidence levels between the VR and control groups at baseline and day-30. CONCLUSIONS: Our study has revealed the challenges associated with implementing such a program, even though the staff has given it high usability ratings. With the ongoing advancement of VR technology, we have the capability to create scenarios and simulations tailored to various healthcare environments. This empowers staff to receive more comprehensive and effective training for handling a wide range of situations.

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Core Tip:
The highlights of this include the evaluation of a VR system that showed reduction in restrictive practices. The use of We used the Everyday Discrimination Scale to measure discrimination levels and conducted hypothesis tests for each question, followed by power analysis. When comparing the day-30 data between the VR group and the control group, we found that Q77, which had shown a significant difference in baseline data previously, no longer exhibited significance, and the power was 0.9981. This suggests the elimination of the significance of Q77, indicating a potential increase in the level of discrimination received in the VR group. The appearance of Q78 significance implies a decrease in received discrimination in the VR group, but the power was low, casting doubt on this conclusion. For Q79, a significant difference was reported with a power of 0.4144. Q79 had also tested differences in the baseline data with a power of 0.2580. However, valid conclusions with high confidence could not be reached since the powers of both tests were not high enough. For the remaining tests, the results were acceptable based on the p-values and high powers. In summary, due to the mixed upward and downward trends, it is challenging to make judgments regarding changes in the level of discrimination among the experimenters based on the data. To evaluate levels of compassion, we calculated the compassionate engagement, action, and total scales from two parts of the questionnaire, representing the compassionate level to others and from others. The results of hypothesis testing and power analysis indicated that only one p-value was lower than 0.05, initially suggesting that participants in the VR group had lower levels of compassionate engagement from others based on the baseline data. Notably, the use of the Wilcoxon rank sum test showed a significant difference in compassionate engagement when compared to t-tests.

INTRODUCTION

Restrictive practice (RP) can be defined as "any intervention used in health and care settings which restricts a person from doing something they wish to do, or that coerces them into doing something they do not wish to do. In the UK, this could include (but is not limited to) immobilization techniques such as physical, mechanical, and chemical restraint (sedation), seclusion, continuous observation, and restricted leave arrangements "(1). RPs are considered controversial and potentially dangerous as they can have detrimental physical and psychological effects both on patients and staff (2,3). Previous research has shown adverse consequences such as skin abrasions due to force, high levels of anxiety or anger, feelings of powerlessness or deprivation, or even death in the worst-case scenarios (1,4–6). Patients and families have also reported RPs as traumatising or re-traumatising when there is a history of previous trauma (2,4,7,8). Staff on wards have described experiences of emotional discomfort, including feelings of fear, distress, shame, and worrying about patients' rights or physical injuries. These factors can contribute to burnout or poor retention rates of staff (1,5,6). The mental health charity MIND has raised concerns about the inexistence of national standards or accredited training for healthcare staff in the use of RPs (2).

The National Institute for Health and Care Excellence (NICE) encourages the use of the least restrictive option available (9,10). The NICE guidance for short-term management of aggression and violence in mental health outlines that "*health and social care provider organisations should train staff who work in services in which restrictive interventions may be used in psychosocial methods to avoid or minimise restrictive interventions*." (9). Research has shown that allowing staff to develop and practice new skills to manage and de-escalate difficult situations can have a significant impact on reducing the use of RPs (3,15). Most RPs are considered acceptable as a last resort to prevent harm but remain a controversial topic among the general public (3,8,11). Despite increased regulations nationally and worldwide, RPs are still widely used in the National Health Service (NHS). Recent reports published

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by NHS Digital (12) show that RPs are still common, with more than 58,000 incidents in Acute Mental Health and Learning Disability settings; around 5000 per month.

The promotion of the use of least restrictive practices in acute mental health services has been fundamental to the NHS over the past decade (11,13). In 2015, the Mental Health Act Code of Practice set predictions for mental health services to reduce restrictive interventions (13). NHS England's long-term plan outlines' a clear objective for reducing the use of RPs across all the UK; RRPs have been implemented across a variety of Trusts. The Care Quality Commission (CQC) in the UK independently identified 5 different trusts to be used as an example in programmes implemented to reduce restrictive practices (14). The report indicated similar approaches within the programs such as improved leadership, restraint reviews, organizational cultural changes, collaborative empowerment, training staff or patients (3,5-6,11,14). However, research showing the effectiveness of those programs has been scarce, with more detailed rev are needed to better understand the issues surrounding RPs.

The development of technology has allowed for new methods of training to be implemented on global scale with knowledge sharing opportunities (16,17). WMerging healthcare technologies provide opportunities to simulate virtual environments to better learn and offer an improved understanding of visual stimuli to improve the sensory experiences (17). One such technology is Virtual Reality (VR) which can be used as an immersive and engaging teaching tool used for education and training to optimise healthcare outcomes for patients (18). VR facilitates scenario based learning to train staff to better manage difficult circumstances such as an encounter with an aggressive or unpredictable patient with complex psychiatric comorbidities. Similar approaches have historically been used within acute clinical areas such as Surgery and Radiology where healthcare professionals can repeatedly practice and receive feedback on the appropriate response in high pressure situations and reducing the overall risk to the patients and staff (19,20). VR training has been researched in a variety of healthcare environments since it is a cost-effective and safe method for the practice of heavily-procedure methods, such as the ones used in surgery (17,21). VR training has been proved to improve the understanding of procedures such as hip replacements (20), laparoscopy (19), screening protocols (17) and elective procedures(21). By allowing students to practice their training and skills thought VR, research has shown promising result in the reduction in the training curve (20), improved clinical skills (19) and a reduction on human error in surgery allowed by repeated training (24). It has been claimed that it can change the future of assessment and treatment of numerous disorders in the mental health area (25). Additionally, VR removes the stress of face-to-face teaching and time constraints in busy hospital environments,(21). VR tools in the context of psychiatry supports healthcare professionals learn from their own approaches in a more controlled setting aiding with developing optimal practice guidelines hence, can be an adaptable and realistic tool to improve quality of care offered.

In its current form, there are limitations when using VR. VR could also be expensive as it may require a variety of regular updates limiting its use within publicaly funded healthcare organisations such as the NHS and those within low-middle-income countries (16). As it is an emerging technology that requires continuous improvements, it is challenging to develop substantial and high quality evidence (24).

Virti is a digital platform that was created for an immersive learning experience in healthcare simulation and training (29). The intended purpose of the technology is to facilitate clinical staff training for the practice of clinical and corporate skills. Virti, simulations could generate best practice methods to reduce restrictive practices. User experience data previously gathered on the Virti platform, demonstrates user preference and increased engagement when using the platform over alternatives such as video, audio and online (30). We designed the TREE study to assess the effect of VR training on reducing restrictive practices in acute medical wards.

METHODS

Aims and Objectives

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The primary aim of this feasibility study was to assess the efficacy of using VR scenarios to provide training on reducing restrictive practices within inpatient psychiatric wards.

Additionally, the study aimed to assess participant-parameters , in relation to reducing the use of restrictive practice based on context-specific confidence, anxiety, compassion and burnout between the intervention and control group. The study also aimed to evaluate the use of the Virti system to deliver RRP training, determining user acceptability, preference, and adherence to the simulations.

In relation to specific measures, the study aimed to assess whether:

- Participants in the VR group report higher levels of confidence and compassion than the control group in delivering non-restrictive practices following the training intervention
- Participants in the VR group will report lower levels of anxiety, discrimination, and burnout than the control group in delivering non-restrictive practices following the training intervention
- Participants in the VR group will show significant decreases in the use of restrictive practices following the training intervention in comparison to the control group

Research Design

An exploratory, randomised controlled, 2-arm, feasibility trial was designed. As the VR system is CE marked, this will be regarded as a medical device study.

The primary site for this study was Southern Health NHS Foundation Trust (SHFT). SHFT has 11 inpatient psychiatric wards of which 4 are specialist forensic units for both adults and adolescents. Thus, the real-world setting makes this feasibility study more adaptable to mental healthcare settings within the UK. The following wards took part in the study:

Ward 1 - Adolescent Low Secure Unit
Ward 2 - Adolescent Medium Secure Unit
Ward 3 - CAMHS inpatient
Ward 4 - Adult Acute
Ward 5 - Adult Acute
Ward 6 - Adult Psychiatric Intensive Care Unit (PICU)
Ward 7 - Adult PICU
Ward 8 - Adult Low Secure Unit
Ward 9 – Adult Medium Secure Unit
Ward 10 – Old Persons Mental Health (OPMH)
Ward 11 – OPMH

Three of these were randomly allocated the VR training in the intervention arm, with three comparator wards also randomly selected from the pool of remaining inpatient wards. Once allocated, the ward / site managers were approached to discuss the study and implementation of VR training in addition to the mandatory training on reducing restrictive practices for staff working on these wards. Study activities were completed within the participating wards.

Recruitment and Selection

Group allocation was clustered at ward level, not at individual level. Study participants were allocated to two parallel study groups. Participant was voluntary.

The inclusion criteria for participants were:

- ≥18 years. There is no upper age limit
- SHFT employee including NHS Professionals
- Clinical staff working in acute inpatient psychiatric wards
- Mandatory training on restrictive practices as part of the job role.
- Willing and able to use VR devices
- Ability to give informed consent

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- Ability to speak and read English fluently

The exclusion criteria included:

- SHFT staff not required to complete restrictive practices training.
- Previous experience on the Virti VR Platform
- Not willing or unable to give informed consent
- Previous experience of cybersickness
- History of epileptic episode (diagnosed or suspected)

Randomisation and Blinding

Participants at each randomised ward were invited to take part in the VR study by the SHFT research team. Each eligible staff received an email with a Qualtrics Core XM link to the study. Participants who complete the consent form in the intervention arm received a log in code to access the VR training to use the VR headsets. All participants who consented to take part in the study completed baseline assessment measures and end of study measures at Week Four. Follow up measures were completed at 6 months.

Intervention

The intervention arm (Group A) had completed the Trust's current standard training on reducing restrictive practice training and then received additional Virti VR training.

Group A: Virti VR training Intervention Arm

Participants received training on patient de-escalation and appropriate use of the restrictive practice using VR. Participants were provided with VR headsets and access the training through Virti's mobile application. The necessary equipment to complete the VR training was provided to participants as part of the study. The VR training consists of four simulations created in collaboration between SHFT Reducing Restrictive Practices training team and Virti. Each simulation was expected to last approximately five minutes. Participants were provided with a training guide with details on how to independently complete the course. Participants can revisit the training as they wish during this period to allow flexibility learning opportunity. Participants were required to complete at least a minimum of two training sessions on each simulation. The VR simulations will incorporate different scenarios from perspectives of a staff, an observer, and a patient. Four simulations were proposed, and is described within table 1;

Group B: Standard training Control Arm

The control arm only received the Trust's current standard face-face and/eLearning training as required by their current job role. The standard training is aimed at clinical staff working within mental health and learning disabilities inpatient services. The training covers the essential aspects of the relevant law and the Trust's standard operating procedures, physical health risks associated with restrictive practices, demonstration of safe and effective application of physical restraints and health monitoring following the intervention.

Outcome measures

Self-Efficacy: General Self-Efficacy (GSE) scale (31)

The GSE was originally developed in Germany and has been adapted to 28 languages (31). Numerous studies have demonstrated the GSE to have High reliability, stability, and construct validity (32, 33). The scale includes only one global dimension measured through 10 items. Participants respond to items such as "Thanks to my resourcefulness, I can handle unforeseen situations" using a 4-point Likert scale ranging from 'not at all true' through to 'exactly true'.

Anxiety: Generalised Anxiety Disorder Assessment 7 (GAD-7) (34)

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The GAD-7 score is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of 'not at all', 'several days', 'more than half the days', and 'nearly every day', respectively, and adding together the scores for the seven questions. Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety, respectively. When used as a screening tool, further evaluation is recommended when the score is 10 or greater.

Health Care Professional Burnout: Burnout Assessment Tool (BAT-12) (35)

The BAT-12 a short version self-reported questionnaire consisting of 12 items in four domains namely, exhaustion, mental distance, cognitive impairment and emotional impairment. Each statement is scored on a range of 1 (never) to 5 (Always).

Discrimination: Everyday Discrimination (EDS) Scale (36)

The EDS it is used as a measure of subjective experiences of daily discrimination against the minority population. This measure contains nine elements that assess the person's daily life, followed by a follow-up question about what the person believes was the reason for that daily discrimination.

Compassion: Compassionate Engagement and Action (CEA) Scale (37)

The Compassionate Engagement and Action Scales comprises three scales which measure self-compassion. Compassion for others, compassion from others and compassion for self each scored separately. For each scale two subscales namely engagement and actions can be calculated. The questionnaire has two aspects of compassion, the *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or supress them. The *second* aspect of compassion is the ability to focus on what is helpful. Participants are asked to rate each statement according to how frequently it occurs on a scale of 1 to 10 (1 being Never; 10 being Always).

Analysis plan

The questionnaire comprised a demographics and psychosocial section based on validated psychological scales and ordinal data. Firstly, a stepwise approach was developed to pre-process the data prior to the analysis. Repeated samples were removed. Then, the scores for anxiety (GAD-7), general self-efficacy scale (GSE), HCP burnout (BAT-12), and compassionate engagement and action scale (CEA) for the experimenters in all periods were calculated. In particular, the score of BAT-12 consists of 12 items in four domains: exhaustion, mental distance, cognitive impairment, and emotional impairment. Additional items in the BAT-12 questionnaire measure the length of working and seeking other job ideas, which were analysed case by case. Furthermore, the System Usability Scale (SUS) was computed to evaluate the global view of subjective usability assessments. The evaluation of discrimination was analysed based on quantifiable data.

Then, hypothesis tests were attempted to assess differences between groups. Before testing the one-month and six-month data, hypothesis testing was performed to check differences in psychological indicators in the baseline data. After completing comparative examinations of the two groups of subjects, hypothesis tests were used on the follow-up data to measure the effect of the VR intervention. Then, power analysis was used to check the validity of the hypothesis testing results. Moreover, the SUS score of one-month data was analysed separately to assess the system's acceptance.

In hypothesis testing, numerical and ordinal variables were treated separately. For numerical variables, the Shapiro-Wilk test was first used to test for normality. This was followed by the Levene test to determine whether the homoscedasticity of the two data groups was satisfied or not to perform the corresponding version of the two-sample t-test. If the data did not satisfy normality, the Wilcoxon rank sum test was performed to check whether the medians of the two groups were equal. For ordinal variables, the Wilcoxon rank sum test was used.

Hypothesis tests and power analysis

Given the two groups of data $\{y_{1j}\}_{j=1}^{n_1}$ and $\{y_{2j}\}_{j=1}^{n_2}$, where y_{1j} and y_{2j} denote any values of our interested indicator in group 1 (VR group) and group 2 (Ordinary group), respectively, and n_1, n_2 represent the sample numbers.

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For a two-sample t-test which in the case of homoscedasticity, the null hypothesis is H_0: $\mu_1 = \mu_2$, where μ_i denotes the mean of the distribution of a variable/indicator (e.g., GAD7 score, GSE score, etc.) for group i. And the alternative hypothesis is H_1: $\mu_1 \neq \mu_2$. Let $\overline{y_1}$ and $\overline{y_2}$ denote the mean of our data for both groups, $S_1^2 = \frac{1}{n_1-1}\sum_{j=1}^{n_1}(y_{1j} - \overline{y_1})^2$ and $S_2^2 = \frac{1}{n_2-1}\sum_{j=1}^{n_2}(y_{2j} - \overline{y_2})^2$ be the sample variance of data for two groups. Then, the test statistic is:

$$W = \sum_{i=1}^{n_1+n_2} R_i I_i \quad (1)$$

Under H_0, it follows the student-t distribution with a degree of $n_1 + n_2 - 2$, denoted by T. Based on the given data, the value of t can be calculated, marked by t_{obs}.

Then, the p-value can be calculated by $p = 2Pr(T \geq |t_{obs}|)$. If $p < 0.05$, we reject H_0, which means that we have enough evidence to conclude that there is a significant difference between the means of the two groups at a 0.05 confidence level. Otherwise, we do not have strong evidence to conclude it.

For the Wilcoxon rank sum test, the null hypothesis is H_0: $m_1 \neq m_2$, where m_i denotes the median of group i. And the alternative hypothesis is H_1: $m_1 = m_2$. For $1 \leq i \leq n_1 + n_2$, let R_i be the rank of the i^{th} observation in the combined sample. And let $I_i = 1$ if the i^{th} observation came from group 1; otherwise, 0. Then, the test statistic is defined as:

$$t = \frac{\bar{y_1} - \bar{y_2}}{\sqrt{\frac{(n_1-1)S_1^2+(n_2-1)S_2^2}{n_1+n_2-2}}\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} \quad (2)$$

Since $n_1 > 10$ and $n_2 > 10$, the standard normal distribution can be used to approximate the distribution of W. In fact, under H_0, we have:

$$Z = \frac{W - n_1(n_1+n_2+1)/2}{\sqrt{n_1 n_2(n_1+n_2+1)/12}} \to N(0,1) \quad (3)$$

We can obtain the value of Z based on the data, denoted by z_{obs}. Then, the p-value can be calculated by $p = 2Pr(Z \geq |z_{obs}|)$, where Z is $N(0,1)$. If $p < 0.05$, we reject H_0,

which means that we have enough evidence to conclude that there is a significant difference between the medians of the two groups at a 0.05 significance level. Otherwise, we do not have strong evidence to reject H_0.

Within the data analysis, in addition to p-values, a power analysis was performed to ensure the reliability of the conclusions.

The hypothesis tests were completed on each of the variables within the baseline data. The power analysis was conducted to quantify the reliability of our conclusion.

RESULTS

Demographic information for participants

Demographic data was gathered for all patients and is represented in Table 2.

Comparison between two groups for baseline data

As shown in Table 2, the p-values for most attributes are greater than 0.05. The powers of the tests for most of these variables are large, except for the BAT12 score, compassionate engagement to others' score, compassionate to others' total score, compassionate engagement from others' score, and compassionate from others' total score. These tests are all two-sample t-tests. The Wilcoxon rank sum tests indicated p-values and powers were 0.499(0.9992), 0.096(0.9295), 0.076(0.9006), 0.573(0.9996), and 0.931(1), respectively. The t-test is sensitive to the magnitude of the values and the Wilcoxon rank sum test is not, the t-test is susceptible to low power in small sample problems due to the influence of extreme values. Therefore, combining the harmonious results of both tests indicated a lack of significant difference within the said attributes. The p-values for Q24, Q77, and Q79 are

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lower than 0.05, initially implying that the two groups significantly differ in these measurements. Overall, since there are few possible significant differences and they are only a matter of three words in BAT12, there are essentially no significant differences between the two groups of experimenters.

We assessed different levels of psychosocial indicators, and rates of restrictive practice were performed. Hypothesis testing was not used on 6-month data since there are only 8 samples in the VR group and 5 data in the control group. Therefore, the testing results would lead to high bias and make no sense. The 6-month data were just reported by way of a frequency analysis and demonstrated in tables 10-15

User acceptability, preference, and adherence to the program

The SUS questionnaire was used for this evaluation. Participants in the VR group were required to finish the SUS questionnaire after one month. Firstly, the responses to all questions on the SUS questionnaire are shown in the table below. The answers to each question from top to bottom indicate increasing degrees.

To evaluate the use of Virti VR technology as the RRP training to determine user acceptability, preference, and adherence to the program, the SUS score was computed, and pie charts were drawn to see the completion of the training program. The histogram of the SUS score is shown below.

Most of the respondents' SUS scores were more prominent than 70. And the mean of the SUS score was 71.79. Based on Bangor et al.'s findings (38), the VR platform was approximately better than 62% of products in terms of usability.

Comparative analysis

The GAD7 score was calculated to evaluate the confidence levels between the two groups, and hypothesis tests were applied to the data. The power analysis conducted to check the validity of the p-value. The data after one month for the VR group and the control group, the baseline and one-month data for the VR group, and the baseline and one-month data for the control group were compared. As the p-values are lower than 0.05 and powers are high, there are no statistically significant differences in confidence levels between the VR and control groups at baseline and day-30.

Comparison of levels of anxiety

The hypothesis tests and power analyses were performed on the GSE scores, which can evaluate anxiety levels. The data for comparison was the same as in section 3.2.2. The p-values are lower than 0.05 hence there was no significant difference found in anxiety levels across all three components.

Comparison of levels of discrimination

The everyday discrimination scale was used to measure the discrimination level. Hypothesis tests were applied to every question followed by a power analysis.

A comparative analysis based on day-30 data was conducted between the VR group and the control group. Question 77 reported a significant difference between the two groups at baseline but without a statistically significant difference. Therefore, Question-77 was removed to re-assess the data which indicated an increased level of discrimination within the VR group. There was a significant difference between groups for Question-78 at day-30. The appearance of Question-78 implied a decrease in the received discrimination in the VR group with a lower power calculation. Question-79 showed a significant statistical difference with a p-value of 0.4144. Question-79 tested differences in the baseline data with a p-value of 0.2580. There was no statistically significant difference among the indicators between the baseline and day-30.

Burnout

The BAT12 score was computed, and hypothesis tests were used for the score and remaining items measured the length of working and seeking other job ideas. Also, the power analysis was

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performed to quantify the reliability (Table 8). Whilst there was a lack of statitstically significant difference between the three comparisons, the two-sample t-tests for BAT12 scores showed a lower p-value. Thus, the observed differences may require additional data.

Compassion

To evaluate the levels of compassion, the compassionate engagement, action, and total scales of the two parts of the questionnaire were calculated. The two parts represent the compassionate level to others and the compassionate level from others, respectively. Among these comparisons, only one p-value that is lower than 0.05 was reported, which initially implied that participants in the VR group had lower levels of compassionate engagement from others based on the baseline data. The Wilcoxon rank sum test was used given the small sample size. In particular, the evaluation of compassionate engagement showed a significant difference between the Wilcoxon and t-tests.

Restrictive practice use

The data on the rates of restrictive practices showed that there was a substantial decrease in the use of restrictive practices over the time we implemented the intervention.

DISCUSSION

VR is an immersive and engaging intervention that could be used to enable trainees to learn without compromising patient or staff safety (19-22). VR training has been deemed favourable amongst clinical teams, particularly orthopaedic staff where it is stated that VR training will be standardised practice due to VR mimicking practice in real time, at the convenience of one's time and significantly accessible compared to traditional training sites (39). Our feasibility study found a few significant results that provides the basis to a wider study with a larger sample size.

It seems that, compared within usual training, the VR training was more acceptable for staff. This could be due to the immersive and engaging nature of the training, which is more relatable and applicable for staff. Overall, it seems VR training produces better outcomes and experiences for staff training, even when compared with standardised training scenarios. If VR training can be shown to be highly successful and applicable in reducing RPs, this could be integrated into regular training schedules.

LIMITATIONS

The results are based on a feasibility study at a single centre. To validate these findings further, a clinical trial using multiple sites would be required. However, the results indicate the Virti system could be a valuable tool for hospital settings. Previous research that implemented VR training as part of healthcare education found VR as an efficient way to improve knowledge but also increased satisfaction with the training (24). Studies have found small improvements in knowledge and large improvements in skill following VR training compared with standard training (25). It was noted, however, that these assessments of knowledge and skill may not be directly reflected into clinical competencies (25). Another issue is that many studies exploring the implementation of VR programmes did not have these implemented as part of standard practices; they tended to be very niche to the environment and situation. The usability of the Virti VR Training was deemed better than 62% of products, promoting the relevancy and applicability for the simulation for RP training (38).Recruitment numbers were low, and the data uncovered a low training completion rate, which could be reflected in the lack of significant findings. This is often due to the high-pressured and understaffed ward environments. This means that staff are often pushed to complete their usual tasks and therefore do not have capacity to take part in research studies. Likewise, it is noted that our sample size of this feasibility study was limited and where sample sizes determine statistical strength and larger sample sizes are inevitably more beneficial in determining causes (40), the outcomes produced in this study are perhaps insignificant due to this factor.

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It would also be useful for more interactive VR simulators with a wider array of use-case scenarios to be developed, where staff are more actively involved in decision making within the VR training. This would serve as a more proactive learning approach. Many VR simulations offer the ability for individuals to control and manipulate scenarios. Whilst this study included a 360 immersive environment, there were no opportunities for individuals to actively engage with the programme.

IMPLICATIONS FOR FUTURE RESEARCH

VR training is being implemented across various healthcare disciples. There is scope for this to be widely integrated as part of training-as-usual practices, in order to support staff. This will be particularly advantageous for new staff who have less exposure to clinical environments. It could prevent serious incidents on wards as staff.

Due to the limited research in this specific field, a systematic replication of this study can be beneficial in testing the validity of the proposed aims and hypotheses. Systematic replications are considerably favourable in comparison to literal and operational replications due to the informative nature of detecting new aspects which are yet not known as well as, investigating the existing primary objectives across the different types of subjects, measures, and so on due to not directly replicating the original study (41). Factors hindering this feasibility study is the sampling issue - the lack of participants recruited. When replicating this in future studies the need for a larger sample size should be highly considered along with the primary objectives. This will then determine the validity of the proposal as well as conclude any differences across the different types of subjects, measures, and so on.

CONCLUSION

To date, there has been no research looking into the effectiveness and feasibility of VR training on reducing RPs on inpatients psychiatric wards. Our study has shown the difficulty in implementing such a programme, despite the high usability rated by staff. Through the development of VR, scenarios and simulations can be developed for and applies to a variety of healthcare environment, enabling staff to be better equipped and trained for dealing with situations.

Data Availability Statement: The datasets generated during and/or analysed during the current study are not publicly available but are available from the corresponding author [PP] on reasonable request.

Conflicts of Interest: PP has received research grant from Novo Nordisk, and other, educational from Queen Mary University of London, other from John Wiley & Sons, other from Otsuka, other from Janssen, outside the submitted work. All other authors report no conflict of interest. The views expressed are those of the authors and not necessarily those of the NHS, the National Institute for Health Research, the Department of Health and Social Care or the Academic institutions.

Ethics approval: The study received Health Research Authority (HRA) and Health and Care Research Wales (HCRW) approval. REC Reference: 22/HRA/3030. IRAS number: 317489

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Figure Legends

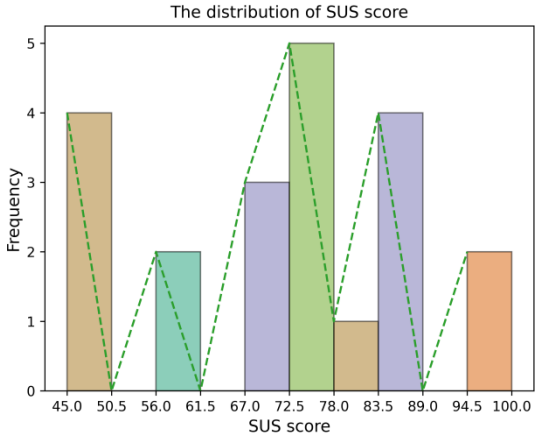

Figure 1. The distribution of the SUS score.

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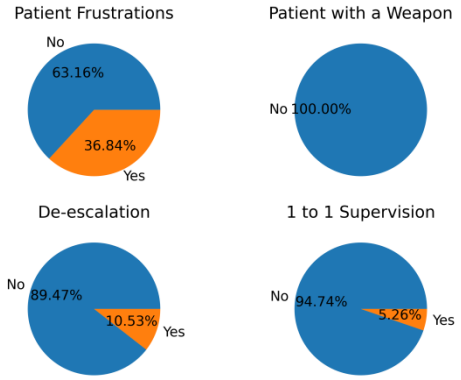

Figure 2. The distribution of the experimenter's completion.

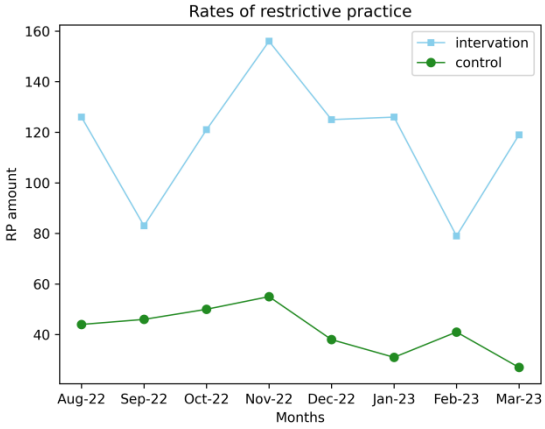

Figure 4. Rates of restrictive practice.

Table 1. demonstrates the simulations proposed for study participants.

Simulation	Scenario	Scene Purpose	Scene Written Description
1	A patient with a weapon approaching a ward staff on the corridor / room – "Chelsea Cosh" / Millwall Brick	To demonstrate de-escalation of situation without the need to use restrictive practices.	Staff member encounters patient with a weapon in day room.
2	A patient confronting, shouting and screaming at a ward staff.	To Introduce learner to a spontaneous situation that may occur on a ward.	Conversation between colleagues about an escalated patient who is angry that another patient has taken their cigarettes and isn't giving them any back. They are distressed that their needs are not being seen to and the ward staff are gesturing that they will be with them soon.
3	Experience of being a patient under	To give user/learner the experience of	Filmed from perspective of patient (1st person). Clinical

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	observation – filmed from a patient's perspective.	being under supervision or observation	worker talking to camera explaining that they are being placed under observation
4	Conflict over restricted area. Dealing with conflict over access to a locked fridge/restricted area	For learners to understand/empathise with frustrations around patients trying to do day to day tasks.	Set in ward communal area/kitchen. Patient enters and is attempting to make a cup of tea.

Table 2. Demographic information.

Characteristic	VR (n = 34, %)	Ordinary (n = 22, %)
Age(yr)	40.8(13.2)[1]	40.7(11.9)
Sex		
Male	9(26.5)	10(45.5)
Female	25(73.5)	12(54.5)
Ethnicity		
White – English / Welsh / Scottish / Northern Irish / British	23(67.6)	11(50)
Any other white background	2(5.9)	1(4.5)
White and Asian	1(2.9)	1(4.5)
Indian	1(2.9)	0(0)
Pakistani	0(0)	1(4.5)
Any other Asian background	1(2.9)	0(0)
African	4(11.8)	8(36.4)
Any other Black / African / Caribbean background	1(2.9)	0(0)
Any other ethnic group	1(2.9)	0(0)
Education level		
No formal educational qualifications	1(2.9)	0(0)
GCSE, O'level, standard grade, or equivalent	9(26.5)	4(18.2)
A-level, higher grade, or equivalent	7(20.5)	4(18.2)
B-Undergraduate degree (e.g., BA or BSc) or equivalent	15(44.1)	9(40.9)
C-Postgraduate degree (e.g., MA or PhD) or equivalent, or above	2(5.9)	5(22.7)
Disorder		
Anxiety	1(2.9)	2(9.1)
Depression	8(23.5)	4(18.2)
Post-Traumatic Stress Disorder	1(2.9)	0(0)
None	21(61.8)	13(59.1)
Other	3(8.8)	3(13.6)
Role		
Mental Health Nurse	9(26.5)	9(40.9)
Healthcare Support Worker	22(64.7)	12(54,5)
Occupational Therapist	0(0)	1(4.5)
Other	3(8.8)	0(0)
Work time in MHS		
Less than 8 months	0(0)	1(4.5)
8 months to 1 year	3(8.8)	1(4.5)
1 to 5 years	19(55.9)	6(27.3)
6 to 10 years	2(5.9)	2(9.1)
More than 10 years	10(29.4)	12(54.5)
Experience in inpatient psychiatric wards		

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Less than 1 year	3(8.8)	2(9.1)
1-2 years	5(14.7)	2(9.1)
3-4 years	7(20.6)	1(4.5)
4-5 years	7(20.6)	3(13.6)
5 or more year	12(35.3)	14(63.6)
Experience in restrictive training		**(n = 21)[2]**
None	2(5.9)	1(4.5)
Less than 1 year	3(8.8)	6(27.3)
1-2 years	6(17.6)	1(4.5)
3-4 years	4(11.8)	0(0)
4-5 years	6(17.6)	3(13.6)
5 or more years	13(38.2)	10(45.5)

1 Values of age are the mean(SD). Other than that, values are n(%).

Table 3. Baseline comparison.

Characteristic	VR (n = 34)[1]	Ordinary (n = 21)	p value	Effective size	Power
GAD7	2.88(4.13)[2]	4.32(5.71) (n = 22)	0.663	0.0597	0.9998
GSE	32.71(4.36)	31.14(3.73)	0.295	0.1420	0.9939
Q70	4.29(1.27)	3.71(1.52)	0.166	0.1940	0.9685
Q72	4.50(1.13)	3.90(1.37)	0.930	0.2050	0.9575
Q73	5.53(0.71)	5.43(1.03)	0.986	0.0028	1
Q74	4.79(1.07)	5.14(1.11)	0.209	0.1790	0.9796
Q75	5.35(0.88)	4.71(1.74)	0.363	0.1360	0.9951
Q76	5.62(0.70)	5.71(0.56)	0.722	0.0616	0.9998
Q77	4.88(0.98)	4.29(0.90)	0.035*	0.2960	0.7211
Q78	5.06(1.37)	4.29(1.79)	0.096	0.2390	0.9028
Q79	5.09(1.22)	3.71(1.79)	0.005**	0.3950	0.2580
The BAT12 score	27.24(6.99)	25.67(7.00)	0.423	0.2211	0.1225
Q24	3.41(1.79)	2.19(1.54)	0.027*	0.3150	0.6365
Q25	3.91(1.11)	3.67(1.32)	0.678	0.0589	0.9998
Q26	1.18(0.39)	1.10(0.30)	0.416	0.1110	0.9981
Q29	1.85(0.93)	2.29(0.90)	0.091	0.2400	0.9006
Q30	2.03(1.06)	1.81(1.17)	0.857	0.1310	0.9959
Q31	2.06(0.95)	1.81(1.08)	0.197	0.1870	0.9742
Compassionate engagement to others score	42.97(8.65)	46.67(6.07)	0.101	0.4564	0.3651
Compassionate action to others score	35.06(5.07)	36.19(4.34)	0.377	0.1210	0.9972
Compassionate to others total score	78.03(11.65)	82.86(8.36)	0.109	0.4458	0.3511
Compassionate engagement from others score	37.94(11.92)	39.14(14.79)	0.742	0.0907	0.0619
Compassionate action from others score	30.62(7.82)	28.48(10.30)	0.550	0.0808	0.9995
Compassionate from others total score	68.56(18.65)	67.62(24.65)	0.874	0.0435	0.0527

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1 The default number of experimenters in the group. If there is a change in the amount of data, it will be indicated in the corresponding place in the table. 2 Values are the mean(SD). * $p < 0.05$; ** $p < 0.01$.

Table 4. Frequency analysis of the SUS questionnaire.

Questions and answers	VR[1] (n = 21, %)
I think that I would like to use this system frequently	
Strongly disagree	0(0)[2]
2	2(9.5)
3	5(23.8)
4	8(38.1)
Strongly agree	6(28.6)
I found the system unnecessarily complex	
Strongly disagree	6(28.6)
2	7(33.3)
3	7(33.3)
4	1(4.8)
Strongly agree	0(0)
I thought the system was easy to use	
Strongly disagree	0(0)
2	1(4.8)
3	5(23.8)
4	10(47.6)
Strongly agree	5(23.8)
I think that I would need the support of a technical person to be able to use this system	
Strongly disagree	5(23.8)
2	10(47.6)
3	5(23.8)
4	1(4.8)
Strongly agree	0(0)
I found the various functions in this system were well integrated	
Strongly disagree	0(0)
2	0(0)
3	9(42.9)
4	6(28.6)
Strongly agree	6(28.6)
I thought there was too much inconsistency in this system	
Strongly disagree	4(19.0)
2	9(42.9)
3	8(38.1)
4	0(0)
Strongly agree	0(0)
I would imagine that most people would learn to use this system very quickly	
Strongly disagree	1(4.8)
2	1(4.8)
3	5(23.8)
4	8(38.1)
Strongly agree	6(28.6)
I found the system very cumbersome to use	
Strongly disagree	4(19.0)

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2	10(47.6)
3	6(28.6)
4	1(4.8)
Strongly agree	0(0)
I felt very confident using the system	
Strongly disagree	0(0)
2	2(9.5)
3	1(4.8)
4	9(42.9)
Strongly agree	9(42.9)
I needed to learn a lot of things before I could get going with this system	
Strongly disagree	6(28.6)
2	6(28.6)
3	7(33.3)
4	1(4.8)
Strongly agree	1(4.8)

1 The VR group of one-month data. 2 Values are the mean(SD).

Table 5. Levels of confidence.

Characteristic	**VR⁺ (n = 23)[1]**	**Ordinary⁺ (n = 17)**	**p value**	**Effective size**	**Power**
GAD7	3.39(3.60)[2]	5.24(5.56)	0.702	0.0613	0.9974
Characteristic	**VR⁺ (n = 23)**	**VR⁻ (n = 34)**	**p value**	**Effective size**	**Power**
GAD7	3.39(3.60)	2.88(4.13)	0.341	0.1280	0.9577
Characteristic	**Ordinary⁺ (n = 17)**	**Ordinary⁻ (n = 22)**	**p value**	**Effective size**	**Power**
GAD7	5.24(5.56)	4.32(5.17)	0.640	0.0768	0.9951

1 The number of experimenters in the group. 2 Values are the mean(SD). + Group of one-month data. - Group of baseline data.

Table 6. Levels of anxiety.

Characteristic	**VR⁺ (n = 23)[1]**	**Ordinary⁺ (n = 17)**	**p value**	**Effective size**	**Power**
GSE	31.78(4.31)[2]	32.82(4.75)	0.367	0.1430	0.9717
Characteristic	**VR⁺ (n = 23)**	**VR⁻ (n = 34)**	**p value**	**Effective size**	**Power**
GSE	31.78(4.31)	32.71(4.36)	0.531	0.0833	0.9996
Characteristic	**Ordinary⁺ (n = 17)**	**Ordinary⁻ (n = 21)**	**p value**	**Effective size**	**Power**
GSE	32.82(4.75)	31.14(3.73)	0.147	0.2370	0.7974

1 The number of experimenters in the group. 2 Values are the mean(SD). + Group of one-month data. - Group of baseline data.

Table 7. Levels of discrimination.

Characteristic	**VR⁺ (n = 23)[1]**	**Ordinary⁺ (n = 17)**	**p value**	**Effective size**	**Power**
Q70	4.13(1.29)[2]	4.12(1.54)	0.924	0.0155	0.9995
Q72	4.39(1.31)	4.53(1.18)	0.712	0.0612	0.9974
Q73	5.08(1.04)	5.47(0.80)	0.286	0.1870	0.9236

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Q74	4.78(1.24)	5.06(1.03)	0.547	0.1000	0.9912
Q75	5.09(1.08)	5.06(1.43)	0.692	0.0678	0.9967
Q76	5.30(0.97)	5.59(0.71)	0.359	0.1660	0.9513
Q77	4.43(1.34)	4.35(0.86)	0.753	0.0517	0.9981
Q78	5.17(1.11)	4.06(1.60)	0.023*	0.3750	0.2722
Q79	5.13(1.14)	4.18(1.51)	0.040*	0.3390	0.4144
Characteristic	**VR+ (n = 23)**	**VR- (n = 34)**	**p value**	**Effective size**	**Power**
Q70	4.13(1.29)	4.29(1.27)	0.620	0.0677	0.9998
Q72	4.39(1.31)	4.50(1.13)	0.712	0.0444	0.9999
Q73	5.08(1.04)	5.53(0.71)	0.152	0.2130	0.9575
Q74	4.78(1.24)	4.79(1.07)	0.909	0.0157	1
Q75	5.09(1.08)	5.35(0.88)	0.375	0.1290	0.9974
Q76	5.30(0.97)	5.62(0.70)	0.216	0.1920	0.9768
Q77	4.43(1.34)	4.88(0.98)	0.251	0.1570	0.9927
Q78	5.17(1.11)	5.06(1.37)	0.981	0.0036	1
Q79	5.13(1.14)	5.09(1.22)	0.987	0.0024	1
Characteristic	**Ordinary+ (n = 17)**	**Ordinary- (n = 21)**	**p value**	**Effective size**	**Power**
Q70	4.12(1.54)	3.71(1.52)	0.454	0.125	0.9784
Q72	4.53(1.18)	3.90(1.37)	0.271	0.189	0.9102
Q73	5.47(0.80)	5.43(1.03)	0.918	0.0198	0.9992
Q74	5.06(1.03)	5.14(1.11)	0.725	0.0619	0.9964
Q75	5.06(1.43)	4.71(1.74)	0.628	0.0864	0.9925
Q76	5.59(0.71)	5.71(0.56)	0.714	0.0773	0.9943
Q77	4.35(0.86)	4.29(0.90)	0.860	0.0306	0.9988
Q78	4.06(1.60)	4.29(1.79)	0.567	0.0950	0.9904
Q79	4.18(1.51)	3.71(1.79)	0.445	0.1260	0.9778

1 The number of experimenters in the group. 2 Values are the mean(SD). + Group of one-month data. - Group of baseline data. * $p < 0.05$

Table 8. Levels of burnout.

Characteristic	**VR+ (n = 23)[1]**	**Ordinary+ (n = 16)**	**p value**	**Effective size**	**Power**
The BAT12 score	29.13(7.25)[2]	26.94(7.64)	0.369	0.2899	0.1397
Q24	2.78(1.54)	3.19(1.76)	0.408	0.1360	0.9721
Q25	3.52(1.31)	3.81(1.28)	0.432	0.1320	0.9748
Q26	1.22(0.42)	1.00(0)	0.253	0.3160	0.4992
Q29	1.74(0.62)	2.00(0.73)	0.304	0.1830	0.9212
Q30	2.04(0.88)	1.94(1.18)	0.458	0.1260	0.9783
Q31	2.09(1.12)	2.06(1.29)	0.797	0.0433	0.9981
Characteristic	**VR+ (n = 23)**	**VR- (n = 34)**	**p value**	**Effective size**	**Power**
The BAT12 score	29.13(7.25)	27.24(6.99)	0.625	0.2634	0.1601
Q24	2.78(1.54)	3.41(1.79)	0.157	0.1950	0.9746
Q25	3.52(1.31)	3.91(1.11)	0.302	0.1450	0.9953
Q26	1.22(0.42)	1.18(0.39)	0.795	0.0504	0.9999
Q29	1.74(0.62)	1.85(0.93)	0.916	0.0151	1
Q30	2.04(0.88)	2.03(1.06)	0.801	0.0351	1
Q31	2.09(1.12)	2.06(0.95)	0.961	0.0069	1

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Characteristic	Ordinary+ (n = 16)	Ordinary- (n = 21)	p value	Effective size	Power
The BAT12 score	26.94(7.64)	25.67(7.00)	0.602	0.1708	0.0792
Q24	3.19(1.76)	2.19(1.54)	0.075	0.3070	0.5218
Q25	3.81(1.28)	3.67(1.32)	0.794	0.0453	0.9973
Q26	1.00(0)	1.10(0.30)	0.624	0.2060	0.8663
Q29	2.00(0.73)	2.29(0.90)	0.391	0.1510	0.9538
Q30	1.94(1.18)	1.81(1.17)	0.646	0.0824	0.9918
Q31	2.06(1.29)	1.81(1.08)	0.581	0.0980	0.9873

1 The number of experimenters in the group. 2 Values are the mean(SD). + Group of one-month data. - Group of baseline data.

Table 9. Levels of compassion.

Characteristic	VR+ (n = 23)[1]	Ordinary+ (n = 16)	p value	Effective size	Power	Wilcoxon p value[4]	Wilcoxon power[5]
Compassionate engagement to others score	42.21 (6.89)[2]	44.13 (4.21)	0.331	0.3141	0.1557	0.291	0.9396 (0.170)[6]
Compassionate action to others score	34.04 (5.05)	36.56 (4.94)	0.058	0.3070	0.5373	------[7]	------
Compassionate to others total score	76.26 (9.64)	80.69 (6.81)	0.122	0.5041	0.3260	0.113	0.7446 (0.2540)
Compassionate engagement from others score	34.65 (9.32)	42.38 (13.21)	0.039*	0.6839	0.5344	0.036*	0.4149 (0.3360)
Compassionate action from others score	27.64 (7.31) (n = 22)[3]	30.75 (10.36)	0.156	0.2320	0.8066	------	------
Compassionate from others total score	62.36 (15.30) (n = 22)[3]	73.13 (22.81)	0.051	0.5605	0.3824	0.051	0.4878 (0.3170)
Characteristic	**VR+ (n = 23)**	**VR- (n = 34)**	**p value**	**Effective size**	**Power**	**Wilcoxon p value**	**Wilcoxon power**
Compassionate engagement to others score	42.21 (6.89)	42.97 (8.65)	0.728	0.0930	0.0632	0.727	0.9999 (0.0464)
Compassionate action to others score	34.04 (5.05)	35.06 (5.07)	0.375	0.1180	0.9984	------	------
Compassionate to others total score	76.26 (9.64)	78.03 (11.65)	0.548	0.1611	0.0902	0.449	0.9992 (0.1000)
Compassionate engagement from others score	34.65 (9.32)	37.94 (11.92)	0.270	0.2965	0.1904	0.248	0.9937 (0.1530)

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Compassionate action from others score	27.64 (7.31) (n = 22)[3]	30.62 (7.82)	0.138	0.1990	0.9629	------	------
Compassionate from others total score	62.36 (15.30) (n = 22)[3]	68.56 (18.65)	0.205	0.3464	0.2375	0.174	0.9806 (0.1820)
Characteristic	**Ordinary⁺ (n = 16)**	**Ordinary⁻ (n = 21)**	**p value**	**Effective size**	**Power**	**Wilcoxon p value**	**Wilcoxon power**
Compassionate engagement to others score	44.13 (4.21)	46.67 (6.07)	0.177	0.4472	0.2586	0.193	0.8450 (0.2150)
Compassionate action to others score	36.56 (4.94)	36.19 (4.34)	0.679	0.0694	0.9944	------	------
Compassionate to others total score	80.69 (6.81)	82.86 (8.36)	0.424	0.2624	0.1201	0.471	0.9782 (0.1190)
Compassionate engagement from others score	42.38 (13.21)	39.14 (14.79)	0.495	0.2237	0.1005	0.500	0.9822 (0.1110)
Compassionate action from others score	30.75 (10.36)	28.48 (10.30)	0.540	0.1010	0.9863	------	------
Compassionate from others total score	73.13 (22.81)	67.62 (24.65)	0.492	0.2256	0.1014	0.462	0.9771 (0.1210)

1 The number of experimenters in the group. 2 Values are the mean(SD). 3 There is a missing value. 4 For the variable that used a two-sample t-test but did not have high power, another Wilcoxon rank sum test was performed. The p-value was calculated. 5 The power and effective size of the Wilcoxon rank sum test. 6 Values are the power(effective size). 7 For the variable that used the Wilcoxon rank sum test or performed t-test but the power was high, another Wilcoxon rank sum test did not need. + Group of one-month data. - Group of baseline data. * $p < 0.05$.

Table 10. Information for GAD7 questionnaire.

GAD7 Questionnaire	Baseline VR (n = 34, %)	Baseline Ordinary (n = 22, %)	One month VR (n = 23, %)	One month Ordinary (n = 17, %)	Six month Ordinary (n = 8, %)	Six month VR (n = 5, %)
Feeling nervous, anxious or on edge						
Not at all	22(64.7)	10(45.5)	13(56.5)	8(47.1)	6(75.0)	2(40.0)
Several days	9(26.5)	6(27.3)	8(34.8)	5(29.4)	1(12.5)	2(40.0)
More than half the days	2(5.9)	4(18.2)	2(8.7)	2(11.8)	1(12.5)	1(20.0)
Nearly everyday	1(2.9)	2(9.1)	0(0)	2(11.8)	0(0)	0(0)
Not being able to stop or control worrying						
Not at all	25(73.5)	14(63.6)	15(65.2)	9(52.9)	5(62.5)	3(60.0)
Several days	7(20.6)	4(18.2)	7(30.4)	4(23.5)	1(12.5)	1(20.0)
More than half the days	0(0)	3(13.6)	0(0)	3(17.6)	2(25.0)	1(20.0)
	2(5.9)	1(4.5)	1(4.3)	1(5.9)	0(0)	0(0)

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Nearly everyday						
Woryring too much about different things						
Not at all	22(64.7)	13(59.1)	12(52.2)	7(41.2)	5(62.5)	3(60.0)
Several days	10(29.4)	5(22.7)	10(43.5)	6(35.3)	1(12.5)	1(20.0)
More than half the days	0(0)	2(9.1)	1(4.3)	3(17.6)	2(25.0)	1(20.0)
Nearly everyday	2(5.9)	2(9.1)	0(0)	1(5.9)	0(0)	0(0)
Trouble relaxing						
Not at all	21(61.8)	14(63.6)	13(56.5)	8(47.1)	5(62.5)	3(60.0)
Several days	9(26.5)	5(22.7)	6(26.1)	6(35.3)	1(12.5)	0(0)
More than half the days	3(8.8)	2(9.1)	2(8.7)	1(5.9)	1(12.5)	1(20.0)
Nearly everyday	1(2.9)	1(4.5)	2(8.7)	2(11.8)	1(12.5)	1(20.0)
Being so restless that it is hard to sit still						
Not at all	27(79.4)	15(68.2)	18(78.3)	8(47.1)	5(62.5)	3(60.0)
Several days	5(14.7)	3(13,6)	4(17.4)	5(29.4)	1(12.5)	1(20.0)
More than half the days	1(2.9)	3(13.6)	1(4.3)	3(17.6)	2(25.0)	1(20.0)
Nearly everyday	1(2.9)	1(4.5)	0(0)	1(5.9)	0(0)	0(0)
Becoming easily annoyed or irritable						
Not at all	19(55.9)	12(54.5)	10(43.5)	11(64.7)	5(62.5)	3(60.0)
Several days	13(38.2)	8(36.4)	11(47.8)	4(23.5)	0(0)	1(20.0)
More than half the days	2(5.9)	2(9.1)	2(8.7)	1(5.9)	3(37.5)	1(20.0)
Nearly everyday	0(0)	0(0)	1(3.6)	1(5.9)	0(0)	0(0)
Feeling afraid as if something awful might happen						
Not at all	29(85.3)	15(68.2)	17(73.9)	11(64.7)	5(62.5)	2(40.0)
Several days	3(8.8)	4(18.2)	5(21.7)	4(23.5)	1(12.5)	2(40.0)
More than half the days	1(2.9)	2(9.1)	1(4.3)	1(5.9)	1(12.5)	1(20.0)
Nearly everyday	1(2.9)	1(4.5)	0(0)	1(5.9)	1(12.5)	0(0)

Table 11. Information for GSE questionnaire.

s	**Baseline VR (n = 34, %)**	**Baseline Ordinary (n = 21, %)**	**One month VR (n = 23, %)**	**One month Ordinary (n = 17, %)**	**Six month Ordinary (n = 8, %)**	**Six month VR (n = 5, %)**
I can always manage to solve difficult problems if I try hard enough						
Not at all true	0(0)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
Hardly true	1(2.9)	1(4.8)	0(0)	1(5.9)	0(0)	1(20.0)
Moderately true	22(64.7)	15(71.4)	15(65.2)	8(47.1)	5(62.5)	1(20.0)
Exactly true	11(32.4)	4(19.0)	7(30.4)	8(47.1)	3(37.5)	3(60.0)

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If someone opposes me, I can find the means and ways to get what I want	5(14.7)	1(4.8)	2(8.7)	3(17.6)	0(0)	0(0)
Not at all true	7(20.6)	6(28.6)	3(13.0)	5(29.4)	1(12.5)	1(20.0)
Hardly true	17(50.0)	14(66.7)	16(69.6)	9(52.9)	5(62.5)	3(60.0)
Moderately true	5(14.7)	0(0)	2(8.7)	0(0)	2(25.0)	1(20.0)
Exactly true						
It is easy for me to stick to my aims and accomplish my goals						
Not at all true	0(0)	0(0)	1(4.3)	1(5.9)	0(0)	0(0)
Hardly true	2(5.9)	1(4.8)	3(13.0)	1(5.9)	0(0)	1(20.0)
Moderately true	24(70.6)	14(66.7)	11(47.8)	10(58.8)	5(62.5)	2(40.0)
Exactly true	8(23.5)	6(28.6)	8(34.8)	5(29.4)	3(37.5)	2(40.0)
I am confident that I could deal efficiently with unexpected events						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	2(5.9)	0(0)	1(4.3)	2(11.8)	0(0)	1(20.0)
Moderately true	17(50.0)	15(71.4)	17(73.9)	6(35.3)	7(87.5)	1(20.0)
Exactly true	15(44.1)	6(28.6)	5(21.7)	9(52.9)	1(12.5)	3(60.0)
Thanks to my resourcefulness, I know how to handle unforeseen situations						
Not at all true	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
Hardly true	1(2.9)	1(4.8)	1(4.3)	2(11.8)	0(0)	1(20.0)
Moderately true	18(52.9)	16(76.2)	17(73.9)	6(35.3)	5(62.5)	1(20.0)
Exactly true	15(44.1)	4(19.0)	5(21.7)	9(52.9)	3(37.5)	3(60.0)
I can solve most problems if I invest the necessary effort						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	0(0)	1(4.8)	0(0)	1(5.9)	0(0)	1(20.0)
Moderately true	18(52.9)	13(61.9)	17(73.9)	5(29.4)	5(62.5)	1(20.0)
Exactly true	15(44.1)	7(33.3)	6(26.1)	11(64.7)	3(37.5)	3(60.0)
I can remain calm when facing difficulties because I can rely on my coping abilities						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	1(2.9)	1(4.8)	1(4.3)	1(5.9)	0(0)	1(20.0)
Moderately true	19(55.9)	16(76.2)	13(56.5)	9(52.9)	5(62.5)	2(40.0)
Exactly true	14(41.2)	4(19.0)	9(39.1)	7(41.2)	3(37.5)	2(40.0)
When I am confronted with a problem, I can						

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usually find several solutions						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	2(5.9)	2(9.5)	1(4.3)	1(5.9)	0(0)	1(20.0)
Moderately true	20(58.8)	16(76.2)	15(65.2)	9(52.9)	5(62.5)	2(40.0)
Exactly true	12(35.3)	3(14.3)	7(30.4)	7(41.2)	3(37.5)	2(40.0)
If I am in trouble, I can usually think of a solution						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	0(0)	1(4.8)	2(8.7)	1(5.9)	0(0)	1(20.0)
Moderately true	23(67.6)	17(81.0)	13(56.5)	10(58.8)	6(75.0)	2(40.0)
Exactly true	11(32.4)	3(14.3)	8(34.8)	6(35.3)	2(25.0)	2(40.0)
I can usually handle whatever comes my way						
Not at all true	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Hardly true	1(2.9)	1(4.8)	1(4.3)	1(5.9)	0(0)	1(20.0)
Moderately true	21(61.8)	14(66.7)	14(60.9)	8(47.1)	6(75.0)	2(40.0)
Exactly true	12(35.3)	6(28.6)	8(34.8)	8(47.1)	2(25.0)	2(40.0)

Table 12. Information for Discrimination questionnaire.

Discrimination Questionnaire	**Baseline VR (n = 34, %)**	**Baseline Ordinary (n = 21, %)**	**One month VR (n = 23, %)**	**One month Ordinary (n = 17, %)**	**Six month Ordinary (n = 8, %)**	**Six month VR (n = 5, %)**
You are treated with less courtesy than other people						
Almost everyday	0(0)	2(9.5)	0(0)	1(5.9)	1(12.5)	0(0)
At least once a week	3(8.8)	2(9.5)	2(8.7)	1(5.9)	1(12.5)	0(0)
A couple of times a month	5(14.7)	5(23.8)	7(30.4)	4(23.5)	1(12.5)	1(20.0)
A couple of times a year	14(41.2)	7(33.3)	4(17.4)	5(29.4)	2(25.0)	3(60.0)
Less than once a year	3(8.8)	1(4.8)	6(26.1)	1(5.9)	1(12.5)	1(20.0)
Never	9(26.5)	4(19.0)	4(17.4)	5(29.4)	2(25.0)	0(0)
You are treated with less respect than other people						
Almost everyday	0(0)	1(4.8)	0(0)	0(0)	1(12.5)	0(0)
At least once a week	1(2.9)	3(14.3)	1(4.3)	0(0)	1(12.5)	0(0)
A couple of times a month	6(17.6)	2(9.5)	6(26.1)	3(17.6)	1(12.5)	1(20.0)
A couple of times a year	10(29.4)	9(42.9)	6(26.1)	8(47.1)	2(25.0)	2(40.0)
Less than once a year	9(26.5)	3(14.3)	3(13.0)	0(0)	1(12.5)	1(20.0)
Never	8(23.5)	3(14.3)	7(30.4)	6(35.3)	2(25.0)	1(20.0)
You receive worse service than other people in restaurants or stores	0(0)	0(0)	0(0)	0(0)	1(12.5)	0(0)
Almost everyday	0(0)	1(4.8)	0(0)	0(0)	0(0)	0(0)

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At least once a week	0(0)	0(0)	2(8.7)	0(0)	0(0)	0(0)
A couple of times a	4(11.8)	2(9.5)	5(21.7)	3(17.6)	0(0)	0(0)
month	8(23.5)	4(19.0)	5(21.7)	3(17.6)	3(37.5)	2(40.0)
A couple of times a year	22(64.7)	14(66.7)	11(47.8)	11(64.7)	4(50.0)	3(60.0)
Less than once a year						
Never						
People act as though they think you are not intelligent						
Almost everyday	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
At least once a week	0(0)	1(4.8)	1(4.3)	0(0)	1(12.5)	0(0)
A couple of times a	4(11.8)	0(0)	3(13.0)	1(5.9)	1(12.5)	0(0)
month	11(32.4)	5(23.8)	5(21.7)	5(29.4)	1(12.5)	2(40.0)
A couple of times a year	7(20.6)	4(19.0)	5(21.7)	3(17.6)	2(25.0)	2(40.0)
Less than once a year	12(35.3)	11(52.4)	9(39.1)	8(47.1)	3(37.5)	1(20.0)
Never						
People act as though they are afraid of you						
Almost everyday	0(0)	2(9.5)	0(0)	1(5.9)	0(0)	1(20.0)
At least once a week	0(0)	1(4.8)	1(4.3)	0(0)	1(12.5)	0(0)
A couple of times a	1(2.9)	2(9.5)	1(4.3)	1(5.9)	0(0)	0(0)
month	6(17.6)	2(9.5)	3(13.0)	3(17.6)	3(37.7)	1(20.0)
A couple of times a year	7(20.6)	3(14.3)	8(34.8)	2(11.8)	2(25.0)	2(40.0)
Less than once a year	20(58.8)	11(52.4)	10(43.5)	10(58.8)	2(25.0)	1(20.0)
Never						
People act as though they think you are dishonest						
Almost everyday	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
At least once a week	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
A couple of times a	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
month	1(2.9)	1(4.8)	2(8.7)	2(11.8)	1(12.5)	0(0)
A couple of times a year	8(23.5)	4(19.0)	8(34.8)	3(17.6)	3(37.5)	0(0)
Less than once a year	24(70.6)	16(76.2)	12(52.2)	12(70.6)	4(50.0)	5(100.0)
Never						
People act as though they are better than you						
Almost everyday	0(0)	0(0)	0(0)	0(0)	1(12.5)	0(0)
At least once a week	0(0)	0(0)	2(7.1)	0(0)	0(0)	0(0)
A couple of times a	3(8.8)	4(19.0)	4(14.3)	2(11.8)	2(25.0)	1(20.0)
month	9(26.5)	9(42.9)	9(32.1)	9(52.9)	2(25.0)	2(40.0)
A couple of times a year	11(32.4)	6(28.6)	6(21.4)	4(23.5)	1(12.5)	2(40.0)
Less than once a year	11(32.4)	2(9.5)	7(25.0)	2(11.8)	2(25.0)	0(0)
Never						
They call you names or insult you						
Almost everyday	1(2.9)	3(14.3)	0(0)	1(5.9)	1(12.5)	0(0)
At least once a week	1(2.9)	1(4.8)	1(4.3)	3(17.6)	0(0)	0(0)
A couple of times a	4(11.8)	2(9.5)	1(4.3)	1(5.9)	0(0)	0(0)
month	2(5.9)	3(14.3)	3(13.0)	5(29.4)	1(12.5)	1(20.0)

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A couple of times a year	7(20.6)	5(23.8)	6(26.1)	3(17.6)	1(12.5)	0(0)
Less than once a year	19(55.9)	7(33.3)	12(52.2)	4(23.5)	5(62.5)	4(80.0)
Never						
You are threatened or assaulted						
Almost everyday	0(0)	3(14.3)	0(0)	1(5.9)	1(12.5)	1(20.0)
At least once a week	1(2.9)	3(14.3)	1(4.3)	1(5.9)	0(0)	0(0)
A couple of times a month	4(11.8)	4(19.0)	1(4.3)	4(23.5)	0(0)	0(0)
A couple of times a year	5(14.7)	3(14.3)	4(17.4)	3(17.6)	0(0)	1(20.0)
Less than once a year	5(14.7)	3(14.3)	5(21.7)	4(23.5)	3(37.5)	1(20.0)
Never	19(55.9)	5(23.8)	12(52.2)	4(23.5)	4(50.0)	2(40.0)

Table 13. Information for BAT12 questionnaire.

BAT12 Questionnaire	Baseline VR (n = 34, %)	Baseline Ordinary (n = 21, %)	One month VR (n = 23, %)	One month Ordinary (n = 16, %)	Six month Ordinary (n = 8, %)	Six month VR (n = 5, %)
At work, I feel mentally exhausted						
Never	1(2.9)	1(4.8)	0(0)	1(6.2)	0(0)	0(0)
Rarely	5(14.7)	4(19.0)	4(17.4)	4(25.0)	1(12.5)	1(20.0)
Sometimes	19(55.9)	11(52.4)	11(47.8)	5(31.2)	6(75.0)	3(60.0)
Often	7(20.6)	5(23.8)	6(26.1)	5(31.2)	0(0)	1(20.0)
Always	2(5.9)	0(0)	2(8.7)	1(6.2)	1(12.5)	0(0)
After a day at work, I find it hard to recover my energy						
Never	3(8.8)	4(19.0)	0(0)	3(18.8)	1(12.5)	2(40.0)
Rarely	14(41.2)	2(9.5)	7(30.4)	1(6.2)	1(12.5)	0(0)
Sometimes	7(20.6)	10(47.6)	9(39.1)	6(37.5)	5(62.5)	1(20.0)
Often	9(26.5)	5(23.8)	3(13.0)	4(25.0)	1(12.5)	1(20.0)
Always	1(2.9)	0(0)	4(17.4)	2(12.5)	0(0)	1(20.0)
At work, I feel physically exhausted						
Never	0(0)	4(19.0)	1(4.3)	2(12.5)	0(0)	0(0)
Rarely	12(35.3)	4(19.0)	5(21.7)	4(25.0)	1(12.5)	3(60.0)
Sometimes	13(38.2)	9(42.9)	10(43.5)	4(25.0)	6(75.0)	1(20.0)
Often	8(23.5)	4(19.0)	6(26.1)	5(31.2)	0(0)	1(20.0)
Always	1(2.9)	0(0)	1(4.3)	1(6.2)	1(12.5)	0(0)
I struggle to find any enthusiasm for my work						
Never	10(29.4)	4(19.0)	3(13.0)	4(25.0)	0(0)	3(60.0)
Rarely	10(29.4)	8(38.1)	9(39.1)	8(50.0)	6(75.0)	0(0)
Sometimes	11(32.4)	7(33.3)	6(26.1)	3(18.8)	2(25.0)	2(40.0)
Often	3(8.8)	1(4.8)	5(21.7)	0(0)	0(0)	0(0)
Always	0(0)	1(4.8)	0(0)	1(6.2)	0(0)	0(0)
I feel a strong aversion towards my job						

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Never	16(47.1)	7(33.3)	9(39.1)	6(37.5)	1(12.5)	2(40.0)
Rarely	12(35.3)	11(52.4)	7(30.4)	6(37.5)	5(62.5)	1(20.0)
Sometimes	5(14.7)	3(14.3)	6(26.1)	3(18.8)	2(25.0)	1(20.0)
Often	1(2.9)	0(0)	1(4.3)	1(6.2)	0(0)	0(0)
Always	0(0)	0(0)	0(0)	0(0)	0(0)	1(20.0)
I'm cynical about what my work means to others						
Never	7(20.6)	5(23.8)	4(17.4)	4(25.0)	1(12.5)	0(0)
Rarely	12(35.3)	7(33.3)	4(17.4)	3(18.8)	2(25.0)	2(40.0)
Sometimes	10(29.4)	7(33.3)	12(52.2)	5(31.2)	4(50.0)	1(20.0)
Often	3(8.8)	2(9.5)	3(13.0)	4(25.0)	1(12.5)	1(20.0)
Always	2(5.9)	0(0)	0(0)	0(0)	0(0)	1(20.0)
At work, I have trouble staying focused						
Never	8(23.5)	7(33.3)	4(17.4)	4(25.0)	1(12.5)	2(40.0)
Rarely	15(44.1)	9(42.9)	8(34.8)	7(43.8)	0(0)	0(0)
Sometimes	7(20.6)	4(19.0)	7(30.4)	5(31.2)	7(87.5)	3(60.0)
Often	3(8.8)	1(4.8)	4(17.4)	0(0)	0(0)	0(0)
Always	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
When I'm working, I have trouble concentrating						
Never	8(23.5)	6(28.6)	3(13.0)	4(25.0)	1(12.5)	2(40.0)
Rarely	14(41.2)	10(47.6)	9(39.1)	8(50.0)	2(25.0)	0(0)
Sometimes	9(26.5)	3(14.3)	8(34.8)	4(25.0)	5(62.5)	3(60.0)
Often	2(5.9)	2(9.5)	3(13.0)	0(0)	0(0)	0(0)
Always	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
I make mistakes in my work because I have my mind on other things						
Never	9(26.5)	11(52.4)	9(39.1)	8(50.0)	1(12.5)	2(40.0)
Rarely	19(55.9)	6(28.6)	11(47.8)	5(31.2)	5(62.5)	2(40.0)
Sometimes	6(17.6)	4(19.0)	3(52.2)	2(12.5)	2(25.0)	1(20.0)
Often	0(0)	0(0)	0(0)	1(6.2)	0(0)	0(0)
Always	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
At work, I feel unable to control my emotions						
Never	9(26.5)	7(33.3)	8(34.8)	8(50.0)	4(50.0)	2(40.0)
Rarely	16(47.1)	12(57.1)	8(34.8)	5(31.2)	3(37.5)	1(20.0)
Sometimes	8(23.5)	2(9.5)	6(26.1)	2(12.5)	1(12.5)	2(40.0)
Often	0(0)	0(0)	1(4.3)	1(6.2)	0(0)	0(0)
Always	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
I do not recognise myself in the way I react emotionally at work						
Never	13(38.2)	15(71.4)	9(39.1)	9(56.2)	3(37.5)	3(60.0)
Rarely	15(44.1)	4(19.0)	9(39.1)	5(31.2)	3(37.5)	1(20.0)
Sometimes	5(14.7)	2(9.5)	3(13.0)	2(12.5)	2(25.0)	0(0)
Often	1(2.9)	0(0)	2(8.7)	0(0)	0(0)	1(20.0)

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Often	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Always						
At work, I might overreact unintentionally						
Never	13(38.2)	5(23.8)	7(30.4)	2(12.5)	4(50.0)	1(20.0)
Rarely	15(44.1)	10(47.6)	11(47.8)	12(75.0)	3(37.5)	3(60.0)
Sometimes	6(17.6)	6(28.6)	5(21.7)	2(12.5)	1(12.5)	0(0)
Often	0(0)	0(0)	0(0)	0(0)	0(0)	1(20.0)
Always	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Thinking back from this moment, over the past 24 hours, how many hours have you worked in your job						
	11(32.4)	11(52.4)	7(30.4)	4(25.0)	3(37.5)	0(0)
0-7	1(2.9)	3(14.3)	4(17.4)	3(18.8)	1(12.5)	0(0)
>7-9	0(0)	2(9.5)	3(13.0)	2(12.5)	0(0)	3(60.0)
>9-11	7(20.6)	2(9.5)	5(21.7)	0(0)	1(12.5)	1(20.0)
>11-13	15(44.1)	3(14.3)	4(17.4)	7(43.8)	3(37.5)	1(20.0)
>13						
On your last full day of work before today, how many hours did you work in your job						
	13(38.2)	15(71.4)	9(39.1)	9(56.2)	1(12.5)	0(0)
Up to 7	15(44.1)	4(19.0)	9(39.1)	5(31.2)	1(12.5)	3(60.0)
>7-9	5(14.7)	2(9.5)	3(13.0)	2(12.5)	1(12.5)	0(0)
>9-11	1(2.9)	0(0)	2(8.7)	0(0)	4(50.0)	0(0)
>11-13	0(0)	0(0)	0(0)	0(0)	1(12.5)	2(40.0)
>13						
Was this a typical length for your working day						
Yes	28(82.4)	19(90.5)	18(78.3)	16(100)	7(87.5)	5(100)
No	6(17.6)	2(9.5)	5(21.7)	0(0)	1(12.5)	0(0)
In the last seven days, including today, how many days have you worked in your job						
	15(44.1)	4(19.0)	8(34.8)	4(25.0)	(n = 7)[1] 3(42.9)	4(80.0)
0-3	11(32.4)	9(42.9)	13(56.5)	8(50.0)	4(57.1)	1(20.0)
4	6(17.6)	6(28.6)	2(8.7)	4(25.0)	0(0)	0(0)
5	2(5.9)	2(9.5)	0(0)	0(0)	0(0)	0(0)
6	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
7						

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How often do you think about leaving your current prefession or occupation						
Never	14(41.2)	11(52.4)	7(30.4)	7(43.8)	5(62.5)	1(20.0)
Several times a year	9(26.5)	7(33.3)	9(39.1)	6(37.5)	1(12.5)	0(0)
Several times a month	7(20.6)	0(0)	6(26.1)	1(6.2)	2(25.0)	2(40.0)
Several times a week	4(11.8)	2(9.5)	1(4.3)	1(6.2)	0(0)	2(40.0)
Everyday	0(0)	1(4.8)	0(0)	1(6.2)	0(0)	0(0)
I am actively seeking employment outside my current profession/ occupation						
Strongly disagree	9(26.5)	11(52.4)	9(39.1)	7(43.8)	2(25.0)	4(80.0)
Disagree	18(52.9)	6(28.6)	6(26.1)	5(31.2)	3(37.5)	0(0)
Neither agree nor	4(11.8)	1(4.8)	6(26.1)	1(6.2)	2(25.0)	0(0)
disagree	2(5.9)	3(14.3)	1(4.3)	2(12.5)	0(0)	0(0)
Agree	1(2.9)	0(0)	1(4.3)	1(6.2)	1(12.5)	1(20.0)
Strongly agree						

1 There is a missing value.

Table 14: Compassion to others questionnaire.

Compassion to others	Baseline VR (n = 34, %)	Baseline Ordinary (n = 21, %)	One month VR (n = 23, %)	One month Ordinary (n = 16, %)	Six month Ordinary (n = 7, %)	Six month VR (n = 5, %)
I am motivated to engage and work with my distress when it arises						
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	1(2.9)	0(0)	0(0)	1(6.2)	0(0)	0(0)
3	1(2.9)	1(4.8)	2(8.7)	0(0)	0(0)	0(0)
4	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
5	4(11.8)	0(0)	4(17.4)	1(6.2)	1(14.3)	1(20.0)
6	4(11.8)	3(14.3)	3(13.0)	2(12.5)	0(0)	0(0)
7	4(11.8)	2(9.5)	2(8.7)	2(12.5)	2(28.6)	1(20.0)
8	5(14.7)	7(33.3)	4(17.4)	5(31.2)	1(14.3)	1(20.0)
9	7(20.6)	5(23.8)	6(26.1)	0(0)	2(28.6)	2(40.0)
Always	7(20.6)	3(14.3)	2(8.7)	5(31.2)	1(14.3)	0(0)
I notice, and am sensitive to my distressed feelings when they arise in me						
Never	1(2.9)	0(0)	1(4.3)	0(0)	0(0)	1(20.0)
2	3(8.8)	1(4.8)	0(0)	0(0)	0(0)	0(0)
3	3(8.8)	0(0)	1(4.3)	2(12.5)	1(14.3)	0(0)
4	1(2.9)	0(0)	0(0)	1(6.2)	0(0)	0(0)
	2(5.9)	0(0)	2(8.7)	0(0)	0(0)	1(20.0)

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5	2(5.9)	2(9.5)	3(13.0)	3(18.8)	1(14.3)	0(0)
6	2(5.9)	1(4.8)	5(21.7)	2(12.5)	1(14.3)	2(40.0)
7	8(23.5)	5(23.8)	4(17.4)	4(25.0)	2(28.6)	0(0)
8	7(20.6)	7(33.3)	5(21.7)	2(12.5)	1(14.3)	1(20.0)
9	5(14.7)	5(23.8)	2(8.7)	2(12.5)	1(14.3)	0(0)
Always						
I avoid thinking about my distress and try to distract myself and put it out of my mid	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
Never	1(2.9)	1(4.8)	0(0)	0(0)	0(0)	0(0)
2	4(11.8)	2(9.5)	1(4.3)	3(18.8)	2(28.6)	1(20.0)
3	0(0)	2(9.5)	2(8.7)	1(6.2)	0(0)	0(0)
4	4(11.8)	2(9.5)	3(13.0)	0(0)	0(0)	1(20.0)
5	3(8.8)	0(0)	1(4.3)	1(6.2)	0(0)	1(20.0)
6	6(17.6)	2(9.5)	4(17.4)	2(12.5)	1(14.3)	0(0)
7	5(14.7)	0(0)	3(13.0)	1(6.2)	0(0)	0(0)
8	6(17.6)	6(28.6)	4(17.4)	3(18.8)	3(42.9)	0(0)
9	5(14.7)	6(28.6)	4(17.4)	5(31.2)	1(14.3)	2(40.0)
Always						
I am emotionally moved by my distressed feelings or situations	3(8.8)	2(9.5)	1(4.3)	2(12.5)	1(14.3)	1(20.0)
Never	4(11.8)	0(0)	2(8.7)	2(12.5)	0(0)	0(0)
2	5(14.7)	3(14.3)	3(13.0)	1(6.2)	1(14.3)	0(0)
3	3(8.8)	2(9.5)	0(0)	1(6.2)	1(14.3)	1(20.0)
4	1(2.9)	2(9.5)	6(26.1)	2(12.5)	0(0)	1(20.0)
5	5(14.7)	4(19.0)	6(26.1)	2(12.5)	1(14.3)	0(0)
6	4(11.8)	1(4.8)	3(13.0)	3(18.8)	1(14.3)	0(0)
7	1(2.9)	5(23.8)	1(4.3)	1(6.2)	0(0)	1(20.0)
8	6(17.6)	0(0)	1(4.3)	2(12.5)	2(28.6)	1(20.0)
9	2(5.9)	2(9.5)	0(0)	0(0)	0(0)	0(0)
Always						
I tolerate the various feelings that are part of my distress	0(0)	0(0)	0(0)	1(6.2)	0(0)	0(0)
Never	1(2.9)	0(0)	1(4.3)	0(0)	0(0)	0(0)
2	1(2.9)	1(4.8)	0(0)	1(6.2)	0(0)	1(20.0)
3	0(0)	0(0)	1(4.3)	2(12.5)	0(0)	0(0)
4	5(14.7)	3(14.3)	2(8.7)	1(6.2)	0(0)	1(20.0)
5	4(11.8)	1(4.8)	2(8.7)	3(18.8)	0(0)	0(0)
6	6(17.6)	6(28.6)	7(30.4)	2(12.5)	2(28.6)	0(0)
7	6(17.6)	5(23.8)	2(8.7)	2(12.5)	2(28.6)	1(20.0)
8	5(14.7)	3(14.3)	7(30.4)	2(12.5)	1(14.3)	0(0)
9	6(17.6)	2(9.5)	1(4.3)	2(12.5)	2(28.6)	2(40.0)
Always						
I reflect on and make sense of other people's						

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distress	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Never	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
2	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
3	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
4	0(0)	0(0)	0(0)	0(0)	0(0)	1(20.0)
5	1(2.9)	3(14.3)	2(8.7)	2(12.5)	0(0)	0(0)
6	7(20.6)	1(4.8)	4(17.4)	1(6.2)	2(28.6)	1(20.0)
7	8(23.5)	3(14.3)	6(26.1)	4(25.0)	1(14.3)	1(20.0)
8	11(32.4)	8(38.1)	7(30.4)	4(25.0)	2(28.6)	0(0)
9	6(17.6)	6(28.6)	3(13.0)	5(31.2)	2(28.6)	2(40.0)
Always						
I do not tolerate other peoples' distress						(n = 4)[1]
Never	13(38.2)	5(23.8)	5(21.7)	8(50.0)	2(28.6)	0(0)
2	10(29.4)	9(42.9)	8(34.8)	5(31.2)	1(14.3)	1(25.0)
3	4(11.8)	3(14.3)	3(13.0)	1(6.2)	1(14.3)	1(25.0)
4	0(0)	2(9.5)	0(0)	0(0)	0(0)	0(0)
5	2(5.9)	0(0)	4(17.4)	2(12.5)	0(0)	0(0)
6	0(0)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
7	2(5.9)	1(4.8)	0(0)	0(0)	1(14.3)	0(0)
8	1(2.9)	0(0)	1(4.3)	0(0)	0(0)	1(25.0)
9	0(0)	0(0)	1(4.3)	0(0)	1(14.3)	1(25.0)
Always	2(5.9)	0(0)	0(0)	0(0)	1(14.3)	0(0)
I am accepting, non-critical and non-judgemental of other people's distress						
Never	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
2	1(2.9)	1(4.8)	2(8.7)	0(0)	0(0)	0(0)
3	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
4	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
5	4(11.8)	0(0)	1(4.3)	0(0)	1(14.3)	0(0)
6	4(11.8)	1(4.8)	3(13.0)	2(12.5)	0(0)	1(20.0)
7	4(11.8)	1(4.8)	0(0)	0(0)	1(14.3)	0(0)
8	5(14.7)	3(14.3)	4(17.4)	0(0)	2(28.6)	2(40.0)
9	7(20.6)	5(23.8)	6(26.1)	3(18.8)	1(14.3)	1(20.0)
Always	7(20.6)	10(47.6)	6(26.1)	11(68.8)	2(28.6)	1(20.0)
I direct attention to what is likely to be helpful to others						
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
3	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
4	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
5	1(2.9)	0(0)	1(4.3)	2(12.5)	0(0)	0(0)
6	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
7	3(8.8)	1(4.8)	2(8.7)	0(0)	1(14.3)	1(20.0)
8	7(20.6)	3(14.3)	5(21.7)	1(6.2)	4(57.1)	0(0)
9	10(29.4)	6(28.6)	8(34.8)	4(25.0)	0(0)	2(40.0)
Always	13(38.2)	11(52.4)	6(26.1)	9(56.2)	2(28.6)	2(40.0)

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I think about and come up with helpful ways for them to cope with their distress	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
3	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
4	1(2.9)	0(0)	1(4.3)	1(6.2)	0(0)	0(0)
5	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
6	3(8.8)	2(9.5)	4(17.4)	2(12.5)	0(0)	1(20.0)
7	11(32.4)	2(9.5)	4(17.4)	0(0)	3(42.9)	0(0)
8	6(17.6)	7(33.3)	7(30.4)	7(43.8)	2(28.6)	2(40.0)
9	13(38.2)	10(47.6)	7(30.4)	6(37.5)	2(28.6)	2(40.0)
Always						
I don't know how to help other people when they are distressed	9(26.5)	6(28.6)	4(17.4)	6(37.5)	2(28.6)	2(40.0)
Never	10(29.4)	7(33.3)	6(26.1)	4(25.0)	1(14.3)	0(0)
2	9(26.5)	3(14.3)	3(13.0)	5(31.2)	0(0)	0(0)
3	3(8.8)	2(9.5)	4(17.4)	0(0)	1(14.3)	1(20.0)
4	1(2.9)	0(0)	4(17.4)	0(0)	0(0)	1(20.0)
5	0(0)	2(9.5)	0(0)	0(0)	0(0)	0(0)
6	0(0)	1(4.8)	1(4.3)	1(6.2)	0(0)	0(0)
7	2(5.9)	0(0)	1(4.3)	0(0)	1(14.3)	0(0)
8	0(0)	0(0)	0(0)	0(0)	1(14.3)	1(20.0)
9	0(0)	0(0)	0(0)	0(0)	1(14.3)	0(0)
Always						
I take the actions and do the things that will be helpful to others	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	1(2.9)	1(4.8)	0(0)	0(0)	0(0)	0(0)
3	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
4	2(5.9)	1(4.8)	2(8.7)	1(6.2)	0(0)	1(20.0)
5	0(0)	0(0)	1(4.3)	0(0)	0(0)	0(0)
6	4(11.8)	1(4.8)	5(21.7)	1(6.2)	0(0)	0(0)
7	5(14.7)	4(19.0)	5(21.7)	0(0)	3(42.9)	0(0)
8	13(38.2)	6(28.6)	2(8.7)	5(31.2)	3(42.9)	2(40.0)
9	9(26.5)	8(38.1)	8(34.8)	9(56.2)	1(14.3)	2(40.0)
Always						
I express feelings of support, helpfulness and encouragement to others	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
	0(0)	1(4.8)	0(0)	0(0)	0(0)	0(0)
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
3	1(2.9)	0(0)	1(4.3)	0(0)	0(0)	0(0)
4	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

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5	2(5.9)	0(0)	4(17.4)	1(6.2)	0(0)	0(0)
6	4(11.8)	2(9.5)	5(21.7)	0(0)	2(28.6)	1(20.0)
7	8(23.5)	7(33.3)	4(17.4)	5(31.2)	2(28.6)	2(40.0)
8	18(52.9)	11(52.4)	9(39.1)	10(62.5)	3(42.9)	2(40.0)
9						
Always						

1 There is a missing value.

Table 15. Compassion from others questionnaire.

Compassion to others	**Baseline VR (n = 34, %)**	**Baseline Ordinary (n = 21, %)**	**One month VR (n = 23, %)[1]**	**One month Ordinary (n = 16, %)**	**Six month Ordinary (n = 7, %)**	**Six month VR (n = 5, %)**
Other people are actively motivated to engage and work with my distress when it arises	0(0)	2(9.5)	2(8.7)	0(0)	0(0)	0(0)
Never	2(5.9)	0(0)	0(0)	2(12.5)	0(0)	0(0)
2	1(2.9)	1(4.8)	1(4.3)	0(0)	0(0)	1(20.0)
3	1(2.9)	1(4.8)	1(4.3)	1(6.2)	0(0)	0(0)
4	6(17.6)	2(9.5)	3(13.0)	2(12.5)	1(14.3)	1(20.0)
5	4(11.8)	2(9.5)	5(21.7)	2(12.5)	0(0)	0(0)
6	3(8.8)	2(9.5)	6(26.1)	1(6.2)	2(28.6)	1(20.0)
7	6(17.6)	4(19.0)	3(13.0)	0(0)	1(14.3)	1(20.0)
8	3(8.8)	2(9.5)	2(8.7)	3(18.8)	2(28.6)	1(20.0)
9	8(23.5)	5(23.8)	0(0)	5(31.2)	1(14.3)	0(0)
Always						
Others notice and are sensitive to my distressed feelings when they arise in me	2(5.9)	1(4.8)	0(0)	1(6.2)	0(0)	0(0)
Never	2(5.9)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
2	3(8.8)	4(19.0)	2(8.7)	3(18.8)	1(14.3)	1(20.0)
3	0(0)	1(4.8)	2(8.7)	0(0)	0(0)	0(0)
4	3(8.8)	0(0)	3(13.0)	3(18.8)	0(0)	0(0)
5	3(8.8)	0(0)	2(8.7)	0(0)	1(14.3)	0(0)
6	8(23.5)	3(14.3)	5(21.7)	1(6.2)	1(14.3)	1(20.0)
7	4(11.8)	5(23.8)	6(26.1)	1(6.2)	2(28.6)	2(40.0)
8	7(20.6)	1(4.8)	2(8.7)	1(6.2)	1(14.3)	0(0)
9	2(5.9)	5(23.8)	0(0)	6(37.5)	1(14.3)	1(20.0)
Always						
Others avoid thinking about my distress, try to distract themselves and put it out of their mind	6(17.6)	4(19.0)	1(4.3)	5(31.2)	0(0)	0(0)
	9(26.5)	3(14.3)	6(26.1)	2(12.5)	0(0)	1(20.0)

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Never	3(8.8)	5(23.8)	3(13.0)	1(6.2)	2(28.6)	2(40.0)
2	3(8.8)	1(4.8)	3(13.0)	3(18.8)	0(0)	0(0)
3	3(8.8)	1(4.8)	3(13.0)	3(18.8)	0(0)	0(0)
4	1(2.9)	1(4.8)	3(13.0)	0(0)	0(0)	0(0)
5	4(11.8)	0(0)	2(8.7)	0(0)	1(14.3)	0(0)
6	3(8.8)	4(19.0)	0(0)	2(12.5)	0(0)	2(40.0)
7	0(0)	1(4.8)	0(0)	0(0)	3(42.9)	0(0)
8	2(5.9)	1(4.8)	0(0)	0(0)	1(14.3)	0(0)
9						
Always						
Others are emotionally moved by my distressed feelings						
Never	4(11.8)	2(9.5)	3(13.0)	1(6.2)	1(14.3)	0(0)
2	4(11.8)	0(0)	2(8.7)	1(6.2)	0(0)	0(0)
3	5(14.7)	4(19.0)	1(4.3)	0(0)	1(14.3)	1(20.0)
4	2(5.9)	2(9.5)	3(13.0)	0(0)	1(14.3)	1(20.0)
5	6(17.6)	1(4.8)	6(26.1)	5(31.2)	0(0)	0(0)
6	3(8.8)	1(4.8)	4(17.4)	1(6.2)	1(14.3)	1(20.0)
7	1(2.9)	3(14.3)	2(8.7)	0(0)	1(14.3)	0(0)
8	7(20.6)	4(19.0)	1(4.3)	5(31.2)	0(0)	1(20.0)
9	1(2.9)	1(4.8)	1(4.3)	3(18.8)	2(28.6)	1(20.0)
Always	1(2.9)	3(14.3)	0(0)	0(0)	0(0)	0(0)
Others tolerate my various feelings that are part of my distress						
Never	2(5.9)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
2	2(5.9)	0(0)	0(0)	0(0)	0(0)	0(0)
3	5(14.7)	3(14.3)	1(4.3)	2(12.5)	0(0)	0(0)
4	2(5.9)	1(4.8)	2(8.7)	1(6.2)	0(0)	0(0)
5	4(11.8)	1(4.8)	6(26.1)	2(12.5)	0(0)	2(40.0)
6	3(8.8)	3(14.3)	4(17.4)	0(0)	0(0)	0(0)
7	6(17.6)	4(19.0)	5(21.7)	3(18.8)	2(28.6)	0(0)
8	4(11.8)	2(9.5)	3(13.0)	2(12.5)	2(28.6)	2(40.0)
9	4(11.8)	3(14.3)	1(4.3)	3(18.8)	1(14.3)	0(0)
Always	2(5.9)	3(14.3)	0(0)	3(18.8)	2(28.6)	1(20.0)
Others reflect on and make sense of my feelings of distress						
Never	2(5.9)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
2	2(5.9)	2(9.5)	0(0)	0(0)	0(0)	0(0)
3	2(5.9)	2(9.5)	1(4.3)	2(12.5)	0(0)	1(20.0)
4	2(5.9)	2(9.5)	2(8.7)	1(6.2)	0(0)	0(0)
5	3(8.8)	1(4.8)	6(26.1)	2(12.5)	0(0)	0(0)
6	2(5.9)	3(14.3)	4(17.4)	0(0)	0(0)	0(0)
7	5(14.7)	4(19.0)	5(21.7)	3(18.8)	2(28.6)	0(0)
8	5(14.7)	2(9.5)	3(13.0)	2(12.5)	1(14.3)	2(40.0)
9	6(17.6)	3(14.3)	1(4.3)	3(18.8)	2(28.6)	1(20.0)
Always	5(14.7)	3(14.3)	0(0)	3(18.8)	2(28.6)	1(20.0)
Others do not tolerate my distress	9(26.5)	5(23.8)	3(13.0)	5(31.2)	2(28.6)	0(0)

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Never	9(26.5)	7(33.3)	6(26.1)	2(12.5)	1(14.3)	1(20.0)
2	6(17.6)	3(14.3)	3(13.0)	2(12.5)	1(14.3)	0(0)
3	2(5.9)	1(4.8)	1(4.3)	2(12.5)	0(0)	0(0)
4	3(8.8)	0(0)	6(26.1)	1(6.2)	0(0)	2(40.0)
5	1(2.9)	1(4.8)	1(4.3)	0(0)	0(0)	0(0)
6	2(5.9)	0(0)	3(13.0)	1(6.2)	1(14.3)	0(0)
7	1(2.9)	2(9.5)	0(0)	1(6.2)	0(0)	2(40.0)
8	1(2.9)	2(9.5)	0(0)	2(12.5)	1(14.3)	0(0)
9	0(0)	0(0)	0(0)	0(0)	1(14.3)	0(0)
Always						
Others are accepting, non-critical and non-judgemental of my feelings of distress						
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	3(8.8)	2(9.5)	1(4.3)	1(6.2)	0(0)	0(0)
3	1(2.9)	2(9.5)	1(4.3)	0(0)	0(0)	1(20.0)
4	3(8.8)	0(0)	1(4.3)	1(6.2)	0(0)	1(20.0)
5	4(11.8)	1(4.8)	8(34.8)	2(12.5)	1(14.3)	0(0)
6	1(2.9)	2(9.5)	4(17.4)	0(0)	0(0)	0(0)
7	3(8.8)	1(4.8)	1(4.3)	2(12.5)	1(14.3)	1(20.0)
8	5(14.7)	6(28.6)	2(8.7)	2(12.5)	2(28.6)	1(20.0)
9	6(17.6)	5(23.8)	3(13.0)	3(18.8)	1(14.3)	1(20.0)
Always	8(23.5)	2(9.5)	2(8.7)	5(31.2)	2(28.6)	0(0)
Others direct their attention to what is likely to be helpful to me						
Never	0(0)	1(4.8)	0(0)	0(0)	0(0)	0(0)
2	1(2.9)	0(0)	1(4.5)	1(6.2)	0(0)	0(0)
3	0(0)	2(9.5)	0(0)	0(0)	0(0)	1(20.0)
4	3(8.8)	1(4.8)	0(0)	1(6.2)	0(0)	0(0)
5	2(5.9)	1(4.8)	6(27.3)	1(6.2)	0(0)	0(0)
6	2(5.9)	1(4.8)	4(18.2)	2(12.5)	0(0)	1(20.0)
7	5(14.7)	3(14.3)	2(9.1)	0(0)	1(14.3)	0(0)
8	7(20.6)	4(19.0)	2(9.1)	2(12.5)	4(57.1)	0(0)
9	7(20.6)	3(14.3)	6(27.3)	5(31.2)	0(0)	3(60.0)
Always	7(20.6)	5(23.8)	1(4.5)	4(25.0)	2(28.6)	0(0)
Others think about and come up with helpful ways for me to cope with my distress						
Never	0(0)	1(4.8)	0(0)	0(0)	0(0)	0(0)
2	1(2.9)	0(0)	1(4.5)	2(12.5)	0(0)	1(20.0)
3	1(2.9)	2(9.5)	0(0)	0(0)	0(0)	0(0)
4	3(8.8)	2(9.5)	0(0)	0(0)	0(0)	0(0)
5	3(8.8)	1(4.8)	6(27.3)	2(12.5)	0(0)	0(0)
6	0(0)	1(4.8)	5(22.7)	0(0)	0(0)	2(40.0)
7	3(8.8)	4(19.0)	1(4.5)	0(0)	0(0)	0(0)
8	9(26.5)	1(4.8)	4(18.2)	2(12.5)	3(42.9)	0(0)
9	5(14.7)	4(19.0)	3(13.6)	6(37.5)	2(28.6)	2(40.0)
	9(26.5)	5(23.8)	2(9.1)	4(25.0)	2(28.6)	0(0)

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Always						
Others don't know how to help me when I am distressed						
Never	8(23.5)	2(9.5)	2(9.1)	1(6.2)	2(28.6)	0(0)
2	4(11.8)	2(9.5)	4(18.2)	6(37.5)	1(14.3)	1(20.0)
3	4(11.8)	5(23.8)	5(22.7)	3(18.8)	0(0)	0(0)
4	2(5.9)	2(9.5)	1(4.5)	1(6.2)	1(14.3)	1(20.0)
5	7(20.6)	3(14.3)	6(27.3)	2(12.5)	0(0)	0(0)
6	0(0)	0(0)	1(4.5)	0(0)	0(0)	1(20.0)
7	4(11.8)	4(19.0)	2(9.1)	0(0)	0(0)	0(0)
8	3(8.8)	1(4.8)	1(4.5)	0(0)	1(14.3)	1(20.0)
9	2(5.9)	1(4.8)	0(0)	6(37.5)	1(14.3)	1(20.0)
Always	0(0)	1(4.8)	0(0)	5(31.2)	1(14.3)	0(0)
Others take the actions and do the things that will be helpful to me						
Never	1(2.9)	0(0)	0(0)	0(0)	0(0)	0(0)
2	2(5.9)	1(4.8)	0(0)	2(12.5)	0(0)	1(20.0)
3	0(0)	3(14.3)	0(0)	1(6.2)	0(0)	0(0)
4	1(2.9)	1(4.8)	0(0)	0(0)	0(0)	0(0)
5	5(14.7)	1(4.8)	7(31.8)	2(12.5)	0(0)	0(0)
6	2(5.9)	0(0)	3(13.6)	0(0)	0(0)	1(20.0)
7	3(8.8)	6(28.6)	2(9.1)	0(0)	0(0)	0(0)
8	9(26.5)	2(9.5)	5(22.7)	0(0)	3(42.9)	0(0)
9	3(8.8)	4(19.0)	4(18.2)	6(37.5)	3(42.9)	2(40.0)
Always	8(23.5)	3(14.3)	1(4.5)	5(31.2)	1(14.3)	1(20.0)
Others treat me with feelings of support, helpfulness and encouragement						
Never	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
2	0(0)	3(14.3)	0(0)	2(12.5)	0(0)	1(20.0)
3	0(0)	1(4.8)	0(0)	0(0)	0(0)	0(0)
4	2(5.9)	0(0)	1(4.5)	0(0)	0(0)	0(0)
5	2(5.9)	2(9.5)	5(22.7)	3(18.8)	0(0)	0(0)
6	2(5.9)	0(0)	4(18.2)	0(0)	0(0)	1(20.0)
7	3(8.8)	2(9.5)	2(9.1)	0(0)	0(0)	0(0)
8	10(29.4)	4(19.0)	3(13.6)	1(6.2)	2(28.6)	0(0)
9	6(17.6)	1(4.8)	4(18.2)	4(25.0)	2(28.6)	2(40.0)
Always	9(26.5)	8(38.1)	3(13.6)	6(37.5)	3(42.9)	1(20.0)

1 From the ninth question, the sample size becomes 22 due to one missing value.