ORIGINAL ARTICLE

EARLY RECOGNITION OF TRAUMATIC STRESS DISORDERS IN PRIMARY HEALTHCARE SETTINGS; CAN IT MAKE A DIFFERENCE?

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ABSTRACT

OBJECTIVE
To see whether the provision of specialist trauma focussed therapies (eye movement desensitisation & reprocessing and sensory motor psychotherapy) in secondary psychiatric services improved primary care clinicians' awareness and recognition of traumatic stress disorders or not.

STUDY DESIGN
Retrospective study

PLACE AND DURATION OF STUDY
The study was carried out in Argyll and Bute area of Scotland, United Kingdom from May 2008 to October 2008 for a period of 6 months.

SUBJECTS AND METHOD
All the non-psychotic and traumatic stress disorders related referrals to the community mental health teams of four sectors (North Argyll, Mid Argyll, Kintyre and Cowal) from primary care clinicians were compared. North Argyll and Mid Argyll were the two areas where specialist trauma focussed therapies were available to patients.

RESULTS
North Argyll had significantly higher number of traumatic stress related referrals as compared with the other three areas (p=0.001), but number of overall non-psychotic referrals were highest not in North Argyll but in Kintyre (p=0.018).

CONCLUSION
Improved awareness and recognition of traumatic stress disorders in North Argyll appeared to be due to specialist trauma therapies available in this area, acting as an indirect awareness raising activity. Direct awareness raising interventions can improve recognition of traumatic stress disorders in other areas as well, resulting in rapid access of clients to relevant treatments.

KEY WORDS
Post traumatic stress disorder, EMDR, Sensory motor psychotherapy.

INTRODUCTION

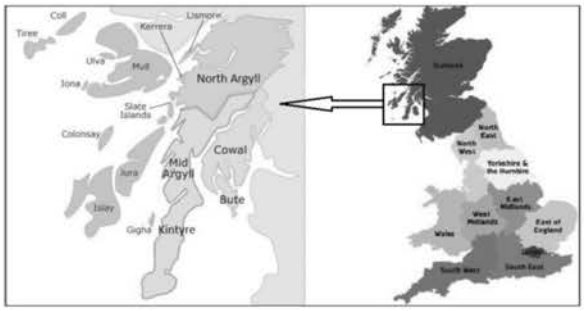
Posttraumatic stress disorder (PTSD) causes significant psychological and physical distress among patients. Stein MB, et al. reported that 11.8% primary care attendees met diagnostic criteria for PTSD[1,2]. Early recognition of common disorders like PTSD is important as this helps access to appropriate treatment early during the course of illness. This in turn reduces the burden on medical as well as psychiatric services because traumatised patients are often high utilizers of medical care[3,4]. Awareness among primary care clinicians for early identification and intervention is also vital[5] as early attention to psychological trauma can even help to prevent PTSD in high risk populations, while early treatment of PTSD can prevent it from becoming a chronic illness[6].

Research has shown that psychological trauma is frequently overlooked in primary care[7-11]. Service user level (fear of retribution, guilt, shame, low self-esteem, learned helplessness) and provider level barriers (education deficit, time constraints, physician discomfort addressing violence, misunderstanding of patient needs, lack of awareness and limited knowledge of PTSD resources and treatment) contribute to poor identification of psychological trauma related disorders[12]. Many studies have stressed the importance of improved screening for traumatic events and PTSD[13,14] in primary as well as secondary care in order to identify these treatable conditions early to prevent patients' sufferings from chronic and complex condition[15]. One of the challenges to early recognition is the variable presentation of traumatic stress disorders[13]. In some cases presenting symptoms are not severe enough to reach the diagnostic threshold, hence referred to as sub threshold PTSD[16]. This can pose further difficulties to prompt recognition of psychological trauma as well as anxiety and depressive disorders which are aetiologically based in trauma. In our study, we investigated whether primary care clinicians, who saw the benefits of treatment of Traumatic stress disorders, could recognise psychological trauma better among patients under their care. We compared the referral patterns in the four geographical sectors of Argyll and Bute council in Highlands of Scotland (figure 1). Unlike Kintyre and Cowal, North Argyll and Mid Argyll provided specialist trauma therapies namely eye movement desensitization and reprocessing (EMDR)[17,18] and sensory-motor psychotherapy (SP)[19].

Over a period of ten years, the North Argyll sector Consultant Psychiatrist, Psychiatric trainees, during their posting, if chose to train in specialist trauma therapies, four community psychiatric nurses (CPNs) in North Argyll and two CPNs in Mid Argyll had voluntarily trained and been offering specialist trauma therapies[17, 18, 19]. None of the primary care practices in all four study areas had received any training or direct awareness raising information about diagnosis of traumatic stress disorders, apart from

letters from clinicians about diagnosis and treatment. This provided an opportunity to assess whether provision of such therapies in these two areas (North and Mid Argyll) had any effect on referrers' ability to identify psychological trauma any differently as compared to other two areas, reflected by relative differences, if any, in number of referrals from Primary care.

Figure 1
Argyll and Bute in Highlands of Scotland



SUBJECTS AND METHODS

Participants

The four sectors selected for our study (figure 1) are predominantly rural and are part of a single local authority council along the west coastal line and are known to have demographic characteristics comparable to the rest of Scotland according to Scottish neighbourhood statistics (an internet based resource by the Scottish government)[20]. Argyll and Bute hospital is a central inpatient facility while the outpatient services were provided separately in each of these sectors within the community mental health teams' (CMHTs) bases. An area covered by a single community mental health team was considered as one sector for ease of collection and handling of data in our study because North Argyll (NA) and Kintyre were covered by two community teams each. So the area with the larger population size was selected. Following Ethics approval, we reviewed case notes and studied all the referrals to the CMHTs from May 2008 to October 2008 for a period of 6 months retrospectively. One doctor from each of these teams studied the referral letters from primary care to the CMHTs and recorded the stated reasons for referrals by the referring clinicians. These reasons for referrals were used as the provisional diagnoses given by the referring clinicians.

- All the non-psychotic provisional diagnoses were included.
- Patients with cognitive deficits were excluded.
- Patients with the main problems of alcohol and/or other substance misuse disorders with or without co-morbid psychiatric conditions were excluded.

The relevant community mental health teams then sent questionnaires to all the 'non-psychotic' patients of their own sectors along with consent forms and covering letters. The patients were requested to fill in the questionnaires if they were willing to participate and believed that their problems were mainly because of their past psychological trauma(s). Participants sent consent forms back to their own community mental health teams and questionnaires to the researchers in the pre-addressed and pre-stamped envelopes. Patients unwilling to participate did not need to respond at all. The only information about participants available to researchers was the area they belonged to as additional approvals were required for researchers based in one area to access identifiable information of patients in other areas. As such there was no way to know whether the patients who sent the questionnaires back were the same as identified by their referring doctors as suffering from traumatic stress related disorders.

11 patients were excluded from the sample due to alcohol and illicit drugs use as main problems according to referral letters from primary care (4 from North Argyll, 3 from Cowal and 4 from Kintyre). The population estimates for the four areas of our study were taken from Scottish neighbourhood statistics20 and these were 19960, 7933, 10233 & 15343 for North Argyll, Mid Argyll, Kintyre and Cowal respectively.

Hence, the collected data included the following:

1. Population estimates for the four areas
2. The number of non-psychotic referrals to the CMHTs
3. The number of responses from the patients who believed that their main problems were due to psychological trauma.

Instrument

The questionnaire selected for our study was the 20 item version of the Centrality of Events Scale (CES) which has a high reliability (α = .94) and a good correlation with the symptoms of PTSD[21]. Questionnaires were used to increase the validity of the participants' responses about their problems, instead of a simple 'yes' or 'no' response to the question of having history of significant psychological trauma. The participants were asked to complete the questionnaire if they had a significant psychological trauma in the past and they believed that the trauma was significantly contributing to their current mental health issues. If there was more than one traumatic incident, the participants were asked to fill in the questionnaire in relation to the event perceived to be most serious. The questionnaires were sent to all the individuals at the same time and they were requested to respond within 4 weeks of the date of issue of the questionnaires.

Procedure

The data was analysed on SPSS v17. Using the estimated population of these areas, expected non-psychotic and expected trauma-related referrals were calculated to analyse observed number of referrals against the expected number. The expected number of referrals was calculated as part of chi square analysis taking in to account the size of the local population of each of these four areas.

RESULTS

A total of 223 patients were identified from the primary care clinicians' letters as being referred for a 'non-psychotic problem' following application of exclusion and inclusion criteria. Out of these non-psychotic patients, 31 were referred specifically for psychological trauma as their main problems (table 1).

Table 1
Observed vs Expected non-psychotic and traumatic stress related referrals in the 4 areas

Overall Non-psychotic referrals			
Region	**Observed N**	**Expected N**	**Residual**
Kintyre	56	42.7	13.3
N A	90	83.2	6.8
M A	21	33.1	-12.1
Cowal	56	64.0	-8.0
Total	223		
$X^2(3) = 10.12$, p = 0.018 Kintyre (and North Argyll to a lesser degree) has proportionately more referrals than expected			
Traumatic stress related referrals			
Region	**Observed N**	**Expected N**	**Residual**
Kintyre	1 (0)	6.1	-5.1
N A	23	11.9	11.1
M A	2	4.7	-2.7
Cowal	6	9.2	-3.2
Total	32 (31)		
$X^2(3) = 17.211$, p = 0.001 North Argyll has proportionately more such referrals than expected as compared to the other 3 regions			

As evident from the analysis, there is a significant difference in the frequency of non-psychotic referrals across the four regions with Kintyre having the highest number of observed as compared with the expected. However, the referrals for psychological trauma were significantly higher in North Argyll as compared with the other three sectors. When the number of non-psychotic referrals in North Argyll was compared separately with Kintyre and the other two (Mid Argyll and Cowal), North Argyll's total non-psychotic referrals were neither significantly higher than Mid Argyll and Cowal (figure 2), nor significantly less than Kintyre (p=0.2558).

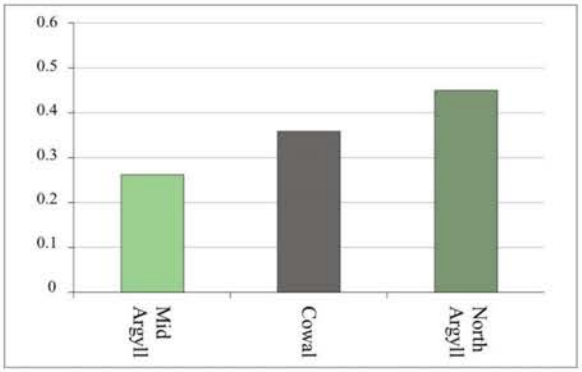


Figure2: Comparison of the ratios of referrals to the area population of the non psychotic referrals in Mid Argyll (21), Cowal (56), North Argyll (90) [p=0.0658]

The higher number of psychological trauma related referrals did not significantly increase the net non-psychotic referrals in North Argyll, although the non psychotic referrals were still more than the expected proportion of the sector's population. The figure 3 demonstrates that within the observed overall non-psychotic referrals, North Argyll primary care doctors were identifying psychological trauma significantly more than those in the other three sectors.

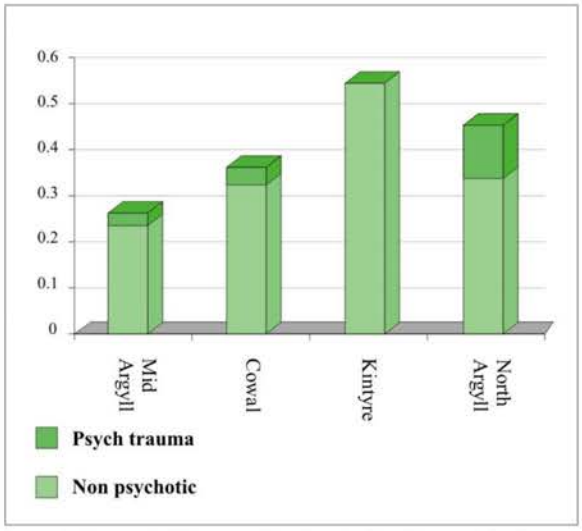


Figure3: Comparison of the non-psychotic & psychological trauma referrals as proportion of the area population. Number of psychological trauma referrals: Total 31 (out of 223), Mid Argyll (2 out of 21), Cowal (6 out of 56), Kintyre (0 out of 56), North Argyll (23 out of 90)

The 33 participants who responded with completed questionnaires (table 2) were 20-70 years of age and included 14 males and 19 females. There was one patient who wrote to the CMHT that he did not want to complete the questionnaire as it reminded him of his traumatic past so he was not included.

Table 2
Patients' perception of their problems being due to psychological trauma (questionnaires returned)

Region	Observed N	Expected N	Residual
Kintyre	1	6.3	-5.3
North Argyll	22	12.3	9.7
Mid Argyll	2	4.9	-2.9
Cowal	8	9.5	1.5
Total	33		
$X^2(3) = 14.02$, p = 0.003,North Argyll has proportionately more questionnaires returned than expected.			

DISCUSSION

Our geographical area of study was a mix of urban and rural areas similar to other rural and urban areas nationally20 (e.g., working age population, employment deprivation, prescription for mental illnesses, hospital admissions). These four areas of the same council

were also comparable demographically and in terms of provision of the mental health care except the provision of specialist trauma focussed therapies in two of the areas. The results showed that the overall non-psychotic referrals from primary care clinicians were not proportionate to the area population and the identification of traumatic stress related problems. Primary care clinicians in North Argyll clearly identified significantly more patients with traumatic stress related problems as compared with other three areas. The results also showed that the significantly more identified cases of traumatic stress related problems did not increase the total number of the non-psychotic referrals, implying that clinicians in other three areas were not identifying the traumatic stress related problems in their patients. Moreover, there were no known significant large scale traumatic events in past, suggesting against any possibility of increased prevalence of traumatic stress disorders in North Argyll alone. Searches from the local council archives and Scottish fire and rescue service data (accessed under The Freedom of Information, Scotland Act 2002) confirmed it. Hence this difference seems highly likely to be a reflection of better identification rather than increased prevalence of traumatic stress disorders in North Argyll which can be best explained by availability of specialist trauma focussed therapies in the absence of any other known awareness-raising interventions in North Argyll.

These results also indicates that referrers in other three areas (Mid Argyll, Kintyre and Cowal) did identify patients in need of further assessment by secondary care psychiatric services (hence comparable overall non-psychotic referrals) but a significant number of patients with traumatic stress disorders may instead have been referred with other non-psychotic provisional impressions. This raises further possibility of this group of patients receiving treatment for conditions they actually did not suffer from, at least until they were referred to the secondary care services. So a significant number of individuals in Mid Argyll, Kintyre and Cowal may have otherwise been suffering in the community for a long time without appropriate evidence based treatment for traumatic stress disorders including PTSD. Delays in treatment of such disorders do have a known adverse impact on overall productivity in life[22,23]. Earlier identification of traumatic stress disorders could allow primary care clinicians to start appropriate pharmacological treatment and also allow them to refer these patients for psychological therapy early which is the mainstay of treatment[24]. Such patients can also result in an additional burden on the healthcare system when there are delays in identifying the problem correctly and symptoms are treated ineffectively as suggested by some studies that this group of patients are high utilizers of medical care[3,4] as well. Further research is required to specifically study the cost of delay in recognition and treatment of traumatic stress disorders.

The provision of specialist trauma therapy in Mid Argyll region did not appear to have any significant impact on the identification of psychological trauma in primary care. This can be explained by the fact that none of the psychiatrists in Mid Argyll was involved in specialist trauma therapy. In contrast, in North Argyll, detailed letters were sent to the general practitioners following assessments and treatment sessions, providing the referrers with information about the problems and management of their patients. This is a standard practice among medical/clinical staff in all localities. While non-medical staff would document details of the treatment sessions in the case notes retained in secondary care, communication through letters to the general practitioners about these sessions did not take place even though the specialist trauma focussed therapies were provided to some patients.

CONCLUSION

North Argyll had a significantly higher number of referrals of patients suffering from traumatic stress disorders including PTSD. Considering the comparable overall non-psychotic referrals to other three areas (figure 3), this difference can be attributed to increased awareness among referrers who recognised these conditions better which are amenable to treatment with the specialist trauma therapies provided in North Argyll area area. There is a need to raise the awareness among primary care clinicians in the other three areas, to allow early identification and effective treatment of patients with traumatic stress disorders. This better awareness in North Argyll was achieved through a slow process of treating effectively many patients over a period of few years but direct awareness-raising activities and trainings in all four areas could help not only to improve this process further in North Argyll, but also help the early identification of potentially treatable conditions in other three areas.

LIMITATIONS AND SUGGESTIONS

There were some methodological limitations in our study. We used only the GP referral letters for provisional impressions, as all doctors are trained to have a basic understanding of psychiatric illnesses[25] during undergraduate medical education. Hence the referrals from non-medical professionals were not included. Despite this method's benefit of providing a degree of validity to the provisional impressions, loss of some of the cases due to lack of identification can not be ruled out. However, the fact that the patients' responses were not less in number as compared with the referrals from primary care clinicians, reflects that even if the patients identified by primary care clinicians were to be different from the patients who responded, inclusion of all the cases would have meant a larger number of patients suffering from traumatic stress which were not being identified. Diagnostic interviews for dual diagnosis[26] in patients with substance misuse problems could not be carried out because researchers needed further approvals to approach patients of CMHTs they were not based at and this could cause delay in starting study possibly to the point of two researchers to rotate to areas outside the study area as part of their training, making it impossible to carry of the study as per ethics approval conditions. Potentially this may have led to loss of some cases of PTSD or other trauma-related conditions. Patients' previous or current case notes were not used to get the final diagnoses as in many cases the patients were only assessed by the members of the teams who were not trained to make formal diagnoses (e.g., nurses). For researchers or an independent interviewer to be able to make formal diagnosis, patient contact was necessary, which was not possible due the ethics approval conditions for this study and time constraints.

Since independent diagnostic interviews of the referred patients were not carried out, we considered the service users' impressions to compare with the number of referrals from primary care clinicians. To increase the validity of the service users' self impression, questionnaires with fairly good correlation to symptoms of PTSD

were used[23]. This method also had its limitation because it is possible that some of the patients referred by the GPs did not respond at all while some participants not identified by the GPs as having trauma-related conditions may have responded with questionnaires. If this happened at all, it could be argued that this was likely to have affected the data from all the four areas similarly. Unfortunately, analyses between number of referrals with traumatic stress related conditions by referring clinicians and patients' responses could not be carried out reliably due to small sample sizes (table 2) and a further study with larger sample size and a closer comparison between the two may provide more useful information in this regard.

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