Abstract
The treatment of torture survivors from diverse cultures has been a difficult task involving issues of loss, massive trauma, cultural style, and adjusting to a new country. Research on treatment outcomes has shown inconsistent results. This report presents a prospective one year treatment outcome of 22 severely tortured patients from Ethiopia, Somalia, Iran and Afghanistan. Treatment was provided by psychiatrists and counselors with interpreters from each culture involved. The specific treatment included psychiatric evaluation, medicine, education, supportive psychotherapy and assisting some social needs. All 22 were diagnosed with depression and 17 of these also had post-traumatic stress disorder (PTSD). Twenty of 22 patients showed marked significant improvement on all of the scales for depression, PTSD, disability, and quality of life. Medicine was particularly useful in treating depression and the symptoms of flashbacks, nightmares and irritability. Standard psychiatric treatment with evaluation, diagnosis, appropriate medicine, supportive psychotherapy and counseling by ethnic counselors provided good outcomes.

Key words: Torture, refugees, survivors, treatment, outcome

Introduction
According to the United Nations High Commissioner for Refugees, in 2007 there were 16 million refugees in the world. In addition, there were 26 million internally displaced persons from conflict. A review of the prevalence of refugees and internally displaced persons who have experienced torture showed a range between 3 and 76%, but the usual range for refugees in western countries has been reported at between five and 35%.1 Despite the large population of refugees affected by torture, there are few reports on treatment of tortured refugees, possibly because of the complex issues of language and cross-cultural psychiatric treatment. The reported approaches have included psychoanalytic therapy,2 group therapy,3,4 treatment by lay counselors in Africa,5 cognitive behavior therapy,6-9 narrative expressive therapy,10 and trauma focused therapy.11 There were two reports on using psychopharmacology. One used newer anti-depressants among Bosnian refugees and showed symptomatic improvement,12 while another used prazosin and showed good improvement in nightmares.13

It has been difficult to document the efficacy and effectiveness of the treatment programmes. A comprehensive multidisciplinary treatment following tortured refugees for nine months and 23 months found no clinical significant improvement.14,15 Two re-
Recent reviews of treatment studies of tortured refugees found that no treatment was firmly supported, but there was some preliminary evidence in one study for using narrative exposure in cognitive therapy\textsuperscript{16} and in another study for trauma-focused therapy\textsuperscript{17}. The general consensus has been that treatment for tortured refugees is behind in research and clinical development as compared to other trauma fields.

In a thoughtful recent review of treatment outcome studies, the complexities involved in torture rehabilitation have been well established, but the authors wisely suggested proceeding with the resources available\textsuperscript{18}. Jaranson and Quiroga\textsuperscript{19} further described the clinical and research difficulties on evaluating torture rehabilitation/treatment programmes. They suggested that without a control group (usually not ethically possible) a quasi-experimental design with a pre and post treatment evaluation is a valid research approach. Clearly there is a need for evaluation of treatment outcomes for torture survivors even with limited resources, i.e., there is almost no funding support for this research. Our goal is to describe the pre treatment and one-year follow-up clinical status of torture survivors in an established and ongoing torture treatment programme.

The major psychiatric disorders of tortured refugees are PTSD and major depressive disorder\textsuperscript{20,21}. It would seem appropriate that the psychiatric approach with cross-cultural influence would be very helpful. The purpose of this report is to describe such an approach utilizing psychiatrists, ethnic counselors, psychiatric evaluations, DSM IV diagnosis, medication, supportive psychotherapy, and case management, providing necessary social and medical needs, in a long established refugee clinic. This report is on 22 torture victims and describes the result of one-year treatment outcome.

Methods
The protocol was approved by the Institution Review Board of Oregon Health & Science University. The setting is a large refugee psychiatric clinic which has been operating for 35 years. It currently treats over 1,300 patients. The research was carried out by the normal clinical staff and, for the clinical staff members, this research study represented an increase in their usual clinical responsibilities. At intake, an administrative assistant administered the scales to patients in a standardized manner, with the clinical ethnic counseling staff acting as interpreters. However, there was no special research funding for this study.

There were no exclusion criteria, and the patients were recruited as they presented to the clinic based on time availability of the staff. Groups specifically chosen for this study were Farsi-speaking patients from Iran and Afghanistan, and patients from Ethiopia and Somalia.

During the time of intake for this study, from February 2009 to January 2010, there were 57 individuals presenting as new patients from these groups, and 33 of these were available and consented to become a part of the study. There were three refusals, all from Somalia.

During the year-follow up, five moved from Portland or discontinued therapy. Therefore, we have a one-year follow-up on 28 patients. This report is on the 22 who were torture victims. The other six were not torture victims. Diagnoses of these six patients not qualifying as torture victims included major depressive disorders (three), social phobia and attention deficit disorder (one), and schizophrenia (one). The treatment of these 22 subjects differed in no way from the usual treatment given to all patients in our clinic with the exception of a more thorough evaluation at intake and at one-year follow-up.
follow-up. Treatment involved comprehensive evaluation, supportive psychotherapy, education, medicine, and counseling by ethnic counselors. This treatment approach will be further described later in this paper.

The Patients
All the patients in this study met the definition of torture, defined as “an act committed by persons acting under the color of law, and specifically intended to inflict physical or mental pain or suffering other than the pain or suffering incidental to lawful sanctions upon another person within his custody or lawful control” and was documented in the initial psychiatric interview.

The patients came from diverse backgrounds, eight were from Iran, five from Afghanistan, six from Ethiopia, and three from Somalia. There were 13 females, with a range of education from none (six), to college (five), four with some high school completion and seven with some elementary education. The ages ranged from 19 to 76, with an average age of 48. Nine had a diagnosis of hypertension, and five, a diagnosis of diabetes. These two diagnoses have been found to be especially high in refugee populations.

The traumas endured by these patients generally came from security forces in Ethiopia and Iran, from the Taliban in Afghanistan, and from associated war lords in Somalia. The patients endured severe trauma, averaging nine events on the Harvard Trauma Scale. Specifically, 14 were physically assaulted, 18 were assaulted with a weapon, 17 experienced forced separation from family members, 11 had murder of family and friends, 16 had unnatural deaths of family and friends, and 19 reported they experienced other incidents that were very frightening or felt that their lives were in danger. Although it was difficult to specifically describe the onset of symptoms in these patients, the patients usually attributed onset as coming right after the last torture period or on entering the United States. Nevertheless, the symptoms in this group of patients are quite chronic, ranging in duration from one to 18 years, with an average duration of eight years at the time of intake.

The Harvard Trauma Scale does not do justice to the severe and appalling traumas these 22 individuals endured. One man was in prison for over a year, tied and beaten regularly at night with arms and legs pulled; a brother in prison never returned. After prison he was deliberately run over by a car and denied medical treatment. A second man was in prison for six years, beaten with barbed wire, had open wounds in his abdominal cavity and face, and has been unable to lift his left arm due to torture. A man’s brother and mother were killed while he watched, in hiding. A woman’s brother tried to stop her rape by the paramilitary rapist and was killed in front of her. She subsequently was raped. Stories such as these are a regular feature of the histories of our patients.

The psychiatric diagnoses were made by the two psychiatrist authors (JDK & JMK) after a diagnostic interview using DSM IV criteria. All patients received a psychiatric diagnosis of major depressive disorder. Additionally, 17 had a diagnosis of PTSD associated with the major depressive disorder; two had panic disorders associated with depression and attention deficit hyperactivity disorder, one obsessive compulsive disorder and two with PTSD and major depression also had psychotic symptoms. The GAFs at intake averaged 50, with a range of 35-55.

Instruments
Instruments routinely administered by ethnic counselors in our clinic and used in this
study included the Harvard Trauma Scale, which has been used in other studies on torture survivors, and the Sheehan Disability Scale, a scale used to determine disability and treatment effects. Additionally, our own analog instrument, similar to the Sheehan Disability Scale, rated nightmares, irritability, and flashbacks following ethnic counselors’ reading of the scale.

Instruments administered by a research assistant in a standardized manner, with interpretations by the ethnic counselors, and used specifically for this study at intake included the Center for Epidemiological Studies Depression Scale, a well used scale for detecting depression. A test for PTSD was an eight-item SPRINT test, a brief global assessment for PTSD disorder and has been used in treatment studies for PTSD.

Quality of life was measured by the WHOQOL-Bref, a 26-item brief test which was fully tested by the World Health Organization in 1998. It has four domains: physical, psychological, social, and environmental. The WHOQOL-Bref has been used to evaluate the quality of life of schizophrenic patients, and there is an Italian version used by De Girolamo and colleagues. This scale also has been used to determine the quality of life of Iranian diabetic patients, as well as mothers of children with asthma in Taiwan.

We chose instruments which would evaluate various aspects of the patients’ lives – symptoms, diagnoses, disabilities affecting family and social relationships, and patients’ perspectives on their quality of life.

At one year regular follow-up visits, which ranged from 11 to 14 months after intake, the scales were again administrated. All scales were read to patients in their native language by their ethnic counselors, attempting to use the same standardized approach done at intake. Patients’ answers were recorded immediately. Medication(s), number of visits, and any special events were recorded from a chart review by the two psychiatrists. JDK and JMK had no knowledge of the research scale results until after one year of treatment.

**Treatments**

After an original evaluation of about one and a half hours, in which a thorough history of trauma was also taken by the treating psychiatrist with the ethnic counselor acting as interpreter, there were ongoing sessions of supportive psychotherapy, education, and medication, with adjustments of medication, as necessary. All ongoing sessions involved the same psychiatrist and ethnic counselor-interpreter working with the patient, in effect, forming a consistent treatment team.

The psychotherapy emphasized a warm, genuine personal relationship with the patient with safety and continuity. Safety meant a similar approach in each meeting without an abrupt, unpredictable change in therapeutic style or confrontation. Continuity was assured with one counselor and one psychiatrist assuming care from intake to throughout treatment, as long as the patient felt it was helpful, i.e., not time limited. The goal was to provide a relationship as opposite to perpetrators as possible. The ongoing sessions dealt with issues of daily life, adjustment problems in the U.S., stressful contacts with family in the home country, living in poverty, and raising children in the culturally complex schools. Medicine education required much explanation as most patients have little experience with a complicated medical system (getting prescriptions filled, obtaining refills, and confusion about side effects).

Treatment also involved letters of support written for patients when necessary for help in finding a job, receiving benefits,
asylum support and citizenship. The counselor also saw the patients independently to assist in social needs and provide supportive counseling. Over the year, the psychiatrists averaged 8 visits, range 4-17, while the counselors’ visits averaged 6, range 1-25.

Medication
All patients were prescribed medication by psychiatrists’ choice, and all were on at least some form of antidepressant medicine for the entire treatment period. Thirteen patients were on SSRIs, six on tricyclics, one on bupropion, and two on duloxetine. In addition, seven patients were on clonidine, one on prazosin, for which there is evidence for CNS noradrenergic activity in PTSD.41 Eleven patients were also on an antipsychotic, two for clear psychotic symptoms and nine, usually at a lower dose of risperidone, a medicine that has been found to be effective in irritable aggression and agitation in PTSD.42

Results
The patients scored extremely high on all the scales at intake. On the CES-D scale at intake, all but one was in the pathological range of 16 and above. The average score was 43. On the Sprint test for PTSD, 21 scored above 13, considered in the pathological range, with an average of 28.5. On the Sheehan Disability Scale, possible scores range from 1-10, with 10 being the worst. The patients averaged 8.6 on social impairment and 8.5 on family impairment at intake. Since few of the patients were employed, the work scale was not used. The WHO Quality of Life Scale is complicated. It showed a low range of quality of life on three dimensions for all patients. The social dimension was not used since it had questions on sexual satisfaction, which were not scored by many patients.

Table 1 indicates the scores of the major scales at intake and at one-year. Chi-Square tests for related groups showed significant differences between intake and one-year follow-up. All tests were highly significant, usually at the 0.000 level.

The more meaningfully clinically useful information is to determine how many of the patients did improve. We had several independent measures including the CES-D, SPRINT, the Sheehan Disability Scale and the Quality of Life Scales. The results are shown in Table 2. On the CES-D of those who scored higher than 16 at intake (N = 21), after one year, nine dropped out of the depressed range, and eleven dropped at least 10 points, showing over a 30% reduction. On the PTSD Scale at intake, all patients had scores higher than 13, indicating the presence of PTSD. At one-year follow-up, 11 patients’ scores dropped below a score of

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<th>Table 1. Group average results at 1 year.</th>
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<tr>
<td><strong>CES-D</strong></td>
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<tr>
<td>Score at Intake</td>
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<tr>
<td>Score at 1 year</td>
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<td>Sig (2 tailed)</td>
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1) Center for Epidemiological Studies—Depression Scale  
2) Sprint-Short Posttraumatic Rating Interview  
3) Sheehan Disability Scale-Social Life  
4) Sheehan Disability Scale-Family Life  
5) WHO Quality of Life Scale, Physical Health  
6) WHO Quality of Life Scale, Psychological Health  
7) WHO Quality of Life Scale, Environmental Health
13, showing significant improvement. Eight patients’ scores dropped to show at least a 25% reduction of PTSD symptoms. Three did not show improvement on the PTSD Scale.

On the Sheehan Disability Scales, improvement was counted as dropping at least three out of the 10 points; on the Sheehan scale of social disability, 10 improved by this measure, while four did not. On the Family Disability Scale, all but four showed improvement. The WHOQOL Scale is more difficult to evaluate, as there are no established norms. We used a positive change of two in the raw score as showing improvement.

By this definition, 17 patients showed improvement, and five patients were worse or the same on physical health. On psychological health, 18 showed improvement, but four were worse or the same. On environmental health, 18 showed improvement, and four did not improve.

Almost all patients showed improvement on the majority of the scales. Two patients, however, both Iranian, showed no or minimum improvement in all of the scales. Neither of these two patients improved on the depression or PTSD Scales and showed no improvement on the Sheehan Social and Family Scales. The remaining 20 patients showed improvement on a majority of scales.

In summary, after one year of psychiatric treatment for torture victims, 20 out of 22 showed significant to moderate improvement on scales measuring psychiatric symptoms, social and family relationships, and quality of life; two did not show improvement and accounted for most of the non-improvement in scale scores.

We are aware that treatment is not the only event that can affect outcome. To try to capture other significant events which occurred in the lives of these 22 patients, significant events were documented at each psychiatric visit and recorded in patients’ charts. Looking at these significant events, eight patients had experienced “positive” events including five who received citizenship, two who found work, and one who separated from a difficult marriage.

Eight patients had experienced “negative” events, including serious illnesses, losing jobs, finding out about unfaithfulness of a spouse, and being laid off from work. The presence or absence of these significant events did not seem to be related to improvement as judged or shown on the scales.

**Discussion**

This study represents an approach of using available clinical resources to provide information on treatment outcome of torture survivors, as Montgomery and Patel\(^\text{18}\)
suggest as a very useful and acceptable research plan. In a field lacking in treatment outcome, we have shown in the sample that the majority of severely tortured survivors can improve in symptoms, disability, and quality of life with comprehensive psychiatric treatment. The programme had many years to develop its treatment approach, and subjectively it seemed effective, but this is the first demonstration of positive result in a prospective study.

Our clinical approach differs from approaches described in much of the literature on treatment of torture survivors, i.e., the majority of reports quoted in the introduction of this paper used psychological therapies alone as a treatment modality. The field has relied on psychological treatment with the apparent belief that psychological trauma is best handled by psychological therapies. This seems to miss a basic observation that torture can or often leads to major psychiatric disorders, including major depression in addition to PTSD. Indeed all of our subjects had major depression while only 17 also had PTSD.

Concentrating on trauma as occurs in trauma focused therapy may miss the symptoms of depression and lead to a further sense of loss and depressed mood. Many of these studies use rating scales for diagnosis of depression and also for PTSD. These scales are screening instruments but lack the subtleties and relationships that are involved in a face-to-face psychiatric interview and treatment.

Our psychotherapy was supportive in nature, emphasizing a relationship of safety and continuity and dealing with current stresses and problems in a new country, and providing information on the welfare system, family distress, and particularly on raising children. Early therapy sessions dealt with medication compliance, clarifying the value of medicine and the difficulties in getting medicine refilled. This was not a trauma focused therapy and after the first session the basic traumas, which were often multiple, were discussed only as the patient led the way and as psychiatrists’ felt it was necessary to discuss the traumas for therapy to proceed effectively.

Medications, antidepressants, adrenergic blocking agents such as clonidine and antipsychotics, were used individually to reduce symptoms. These were very effective for specific symptoms. On an analogue scale 1 to 10 with 10 being the worst, Table 3 shows the scores on flashbacks, nightmares and irritability.

The medication was well accepted by the patients and after medical education we had good compliance with minimal side effects. At our clinic, anti-psychotics were used in half the patients, in two patients for psychotic symptoms of hallucination, and in the remaining nine for agitation and insomnia. Irritability is another critical symptom which can cause much social distress and which is well controlled by medicine. It seems clear that individualized medical treatment can

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<th>Flashbacks</th>
<th>Nightmares</th>
<th>Irritability</th>
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<tr>
<td>At intake</td>
<td>7.73</td>
<td>6.27</td>
<td>5.90</td>
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<tr>
<td>One year follow up</td>
<td>3.86</td>
<td>2.68</td>
<td>3.14</td>
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<td>Exact Sig (2 tailed)</td>
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Table 3. Own analog symptom scale, administered at intake and one-year follow-up N = 22.

Chi Square / Sign test binomial distribution used.
reduce some major symptoms associated with torture, improve the quality of life and provide good relief.

The study has advantages and disadvantages. One advantage is having a clinic with a long history, over 34 years, with a good reputation among the refugee population, and a critical mass of patients, in which the newer patients would feel at least familiar and less disturbed about being in a psychiatric clinic. Obviously the most important aspect of this clinic, besides culturally sensitive psychiatrists, is counselors who come from the culture, speak the language of the patient, and offer support and continuity of treatment. We have a good retention rate in our clinic. During the year of this study, five patients involved in our study dropped out or moved, which gave us a dropout rate of 17%. This is not a high dropout number for minority mental health clinic, in which patients usually have the tendency to move frequently and lack accurate knowledge about long term psychiatric care.

Among the limitations of the study is first of all the fact that there were only 22 patients who were followed for a year. Secondly, there was no control group. In our opinion, withholding treatment to obtain a control group to these severely traumatized patients was unethical, i.e., to withhold treatment to a severely suffering patient seeking relief. Also withholding treatment would greatly affect our programme’s credibility in the refugee community which has relied on our programme for receiving some immediate care.

This report has the problems of a real clinical approach. The diverse ethnic groups, diverse torture experiences, and diverse medicine perhaps make it challenging to suggest guidelines which might be universally appropriate. A special concern may be that the counselors themselves administered the instruments to the patients at the one-year post treatment date. We had no research assistance at that time. The counselor may have had a positive bias which influenced how the results were recorded. This is unlikely as these were quite diverse responses, and two survivors’ responses were totally negative, i.e., totally not improved. For the study, the psychiatrists gave an independent GAF rating after every session with the patient.

Psychiatrists’ independent GAF ratings at one year follow up correlate well with patients’ responses as recorded by counselors (Spearman rho correlation coefficient is .56; sig <.01).

A special note should be made of the two patients who did not improve, both are Iranians, college graduates. One who had been tortured, raped and imprisoned, had no housing, no job and was moving around to different parts of the area. Her marriage fell apart during this time. Although special sessions were set aside to discuss the details of the rape, the patient was unable to talk about it. The other patient, a male, came from a well-to-do family, was highly protected by family members who refused his desire to marry a girlfriend. He seemed unable to live independently with the family maintaining control over him. It is unknown to what extent this prevented his improvement. These cases are unique but seem not qualitatively or quantitatively different from most of the other cases.

We would like to make a special appeal that torture survivors be given the benefit of a thorough in-person psychiatric evaluation and supportive treatment, emphasizing continuity, safety and meeting their ongoing social needs, as well as given appropriate medication. We hope that this information will be readily available and that other studies could duplicate our results.
Conclusion
A psychiatric approach emphasizing thorough psychiatric interview evaluation, diagnoses, supportive psychotherapy and ethnic counselors as case managers and interpreters in this report has demonstrated good treatment for 20 of 22 patients in a one-year follow-up study of torture survivors. Emphasis was not placed on therapy for the various traumas encountered. Rather, the long term relationship with the psychiatrist, medicine, and counselor-case managers from the patients’ culture provide the effective ingredients of the treatment programme. We encourage other programmes to adopt aspects of this approach and research the treatment outcomes.

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22. Torture Victims Relief Act, section 2340(1) of Title 18, United States Code, 1998.


