MENTAL HEALTH SCREENING AMONG RUSSIAN-SPEAKING IMMIGRANTS

by

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Certificate of Approval

This is to certify that the M.P.H. thesis of

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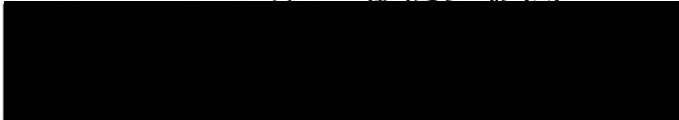Bentson McFarland, M.D., Ph.D. Committee Chair

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ABSTRACT

Russian-speaking refugees and immigrants are among the largest immigrant groups to settle in the United States during the 1990's. The conditions that refugees and immigrants are leaving and the process of migration predispose some populations to increased levels of mental disorders. These problems may not be readily identified and treated by the medical establishment because of a lack of awareness of specific problems and cultural and linguistic barriers. Little is known about the specific mental health needs of Russian-speaking refugees.

The purpose of this project was to develop and evaluate the validity and reliability of a Russian-language screening instrument for three mental health categories frequently diagnosed among refugees and immigrants - PTSD, generalized anxiety, and depression - and mental and physical quality of life. The long-range intent is to test the hypothesis that Russian-speaking immigrants suffer from mental disorders at a rate significantly higher than the overall United States population.

After a review of available instruments, I choose to culturally adapt and translate the Harvard Trauma Questionnaire, Hopkins Symptom Checklist, and Short Form-12 quality of life instrument. Seventeen psychiatric clinic subjects with known diagnoses and 42 community subjects completed the self-rating questionnaire. Clinic subjects had significantly worse scores in post traumatic stress disorder, anxiety, depression, physical SF-12 component, and mental SF-12 component scores. SF-12 scores for the community subjects reflected a physical component score equivalent to the United States cross-section; whereas, the mental component score was significantly worse.

I have prepared an instrument with good psychometric performance characteristics. In addition, the results suggest that Russian-speaking immigrants have a poorer mental well being than the general United States population.

MENTAL HEALTH

Mental disorders significantly affect health and quality of life. The presence of such disorders may not be immediately apparent to primary health care providers - especially among certain populations. Defining the problem in the general population as well as among sub-groups, that may have higher or lower prevalence, is essential for maximizing the potential for diagnosis and management of mental disorders. This thesis describes the qualitative and quantitative approach to developing a screening instrument for identifying the population prevalence of significant mental disorders among Russian-speaking people.

Two large surveys based on samples of the United States population provide estimates for the prevalence of disorders from several diagnostic categories: the National Comorbidity Survey (NCS) and the Epidemiologic Catchment Area study (ECA). The National Comorbidity Survey is a cross-sectional study, completed in the early 1990s, of a sample of the United States population from ages 15 – 54 years. The study used a structured psychiatric screening interview adapted from the Composite International Diagnostic Interview (CIDI[1];). The CIDI is based on the *Diagnostic and Statistical Manual of Mental Disorders*, Third Edition– Revised (DSM-III-R).

The Epidemiologic Catchment Area study is a cross-sectional study of a United States population sample of individuals 18 years or older completed in the early 1980s. Interviewers screened individuals using the NIMH DIS, an instrument based on the

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Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) designed to estimate six-month prevalence.

Results from both studies were analyzed in the 1999 Surgeon General's Report on Mental Health to develop a best estimate of one-year prevalence.[2] For most disorders the level reported by the NCS was higher and was the level adopted in the Surgeon General's Report. Best estimate twelve-month prevalence for several mood and anxiety disorders are listed in the following table (Table 1).

Table 1: Best estimate 1-year prevalence rates from Surgeon General's Report, ages 18—54 (based on ECA and NCS).

Disorder	Percent
Mood disorders	**7.1**
Bipolar I & II	1.7
Major depression	6.5
Dysthymia	1.6
Anxiety Disorders	**16.4**
Generalized anxiety	3.4
PTSD	3.6

Comorbidity between mental disorders is common. For example, a large fraction of individuals with depression or post traumatic stress disorder (PTSD) are also diagnosed with another psychiatric disorder. The National Comorbidity Survey reported a 51% comorbidity of any anxiety disorder with major depression and an 18% comorbidity of any substance use disorder with major depression. Generalized anxiety or PTSD occurred in 15% of cases of major depression.[3, 4]

Individuals with mental disorder are more likely to suffer from somatization - that is, mental disorders may manifest physical symptoms. Andreski et al. reported that in a

sample of subjects with PTSD, forty percent suffered from conversion reaction (such as pseudo-seizures) or gastrointestinal somatization. Eighty percent of individuals with PTSD have been reported to suffer from cardiopulmonary somatization often manifesting as chest pain.[5]

The combination of the symptoms of mental disorder, frequent comorbidities, somatization, and the high prevalence makes mental disorders a leading health concern in the United States. Mental disorders are estimated to be the second leading cause of morbidity in the United States following cardiovascular disease - mental disorders accounts for 15% of Disability Adjusted Life Years (DALYs); cardiovascular disease accounts for 18%.[6]

The morbidity of mental disorders could potentially be reduced through increased diagnosis and treatment. Currently mental disorders are under-diagnosed and under-treated. Individuals suffering from a mental disorder may not seek care due to failure to recognize the illness or denial of the illness. Individuals with major depression often have reduced motivation, are passive, and may blame themselves for problems. Each of these characteristics decreases the likelihood of seeking care. Individuals may not seek care due to their perception that mental illness is not "real illness" or perceptions that treatment is futile.[7]

Providers of medical care frequently fail to diagnose mental disorders. Primary care providers may not consider the possibility of mental disorder based on patient concerns

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or may be unsure how to handle a mental disorder diagnosis. This is especially likely to occur if the patient's chief concern revolves around somatization. Furthermore, a provider may be hesitant to devote the time to diagnose and treat a mental disorder. Several studies have reported significant under-treatment of depression in primary care settings.[8,9,7]

Diagnosis of mental disorders is based on symptom criteria presented in the *Diagnostic and Statistical Manual of Mental Disorders*, Forth Edition (DSM-IV, 1994). Two categories of mental disorders are mood disorders and anxiety disorders. (Appendix A contains the specific diagnostic criteria from the DSM-IV for major depression, dysthymia, generalized anxiety, post traumatic stress disorder, and acute stress disorder.) Mood disorders are divided into three categories: depressive, bipolar, and secondary mood disorders. The two major categories of depressive disorders are major depression and dysthymia. Key diagnostic symptoms for both major depression and dysthymia are dysphoria, appetite disturbance, sleep disturbance, fatigue or loss of energy, low self-esteem, diminished concentration, indecisiveness, anhedonia, and feeling of hopelessness coupled with significant functional impairment. Major depression and dysthymia differ in number, severity, and duration of symptoms – major depression being more severe.

Secondary mood disorders involve some symptoms of depressive disorders. These include adjustment disorder with depressed mood and mood disorders due to general medical conditions. Adjustment disorder is a psychological response to a psychosocial stressor that causes significant functional impairment.

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Anxiety disorders are another broad diagnostic category. Included in this category are panic disorder and agoraphobia, social phobia, specific phobias, obsessive-compulsive disorder, PTSD, generalized anxiety disorder, and acute stress disorder. The most important of these disorders to this investigation are generalized anxiety disorder, PTSD, and acute stress disorder.

Generalized anxiety is characterized by chronic and excessive worry and is accompanied by restlessness, fatigue, difficulty concentrating, vigilance, irritability, muscle tension, and sleep problems. These symptoms must cause significant impairment and occur in the absence of another psychiatric or medical disorders.

Post traumatic stress disorder (PTSD) is a severe, and typically chronic, response to catastrophic events. Traumatic events can include direct injury to one's body such as occurs in physical assault, military combat, serious accidents, and natural disasters or psychological trauma such as witnessing mutilation or serious injury, threat of serious danger, and serious neglect during childhood.

Diagnosis of PTSD requires the presence of symptoms from three categories: persistent re-experiencing, persistent avoidance, and hyperarousal. Re-experiencing can occur by intrusive recollections, distressing dreams, dissociative flashbacks, and intense psychological distress in response to internal or external cues. Avoidance includes efforts to avoid thoughts, feelings, or conversations, people or activities that arouse

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recollections; anhedonia; and feeling of detachment, restricted affect, and sense of foreshortened future. Hyperarousal includes sleep problems, irritability, difficulty concentrating, hypervigilance, and exaggerated startle response.

Acute stress disorder is a reaction to traumatic experiences and is a predictor of later development of PTSD although many people who experience an acute stress disorder do not develop PTSD. Symptoms are similar to those of PTSD but lasts for a maximum of four weeks.

Adjustment reaction has symptoms similar to PTSD and anxiety, although the symptoms are usually milder, limited in time, and occur in response to a significantly stressful event such as immigration, loss of a loved one, and major change in ones life.

Considerable overlap exists between various psychiatric diagnoses. Bipolar disorders often include periods during which depressive symptoms are present. Depression and PTSD both have symptoms of sleep disturbances and anhedonia. Generalized anxiety shares the symptoms of difficulty concentrating and sleep disturbances with depressive disorders. This overlap presents a diagnostic challenge to differentiating these conditions - especially for surveys of mental disorders. Presumably, because of the limitations of screening, many studies report levels of 'depression' without differentiating between major depression, dysthymia, bipolar disorders with depression, and secondary mood disorders.

REFUGEES

While mental disorders are likely underdiagnosed among all segments of society, certain groups may be at elevated risk for both the disorders and the failure to have them diagnosed. Such populations include immigrants and refugees who have experiential, language, and cultural differences from most primary care or mental health providers and have economic and cultural limitations to accessing health care.

Several million refugees have found sanctuary in the United States. Many of these refugees suffered through war, torture, and persecution in their countries of origin. This physical and psychological trauma can lead to PTSD, generalized anxiety, and depression.[10,11] For example, Cambodians fleeing the brutal regime of Pol Pot have a very high prevalence of PTSD. In a community sample of adolescent Cambodian refugees, 44% met criteria for PTSD.[12]

Vietnamese fleeing trauma and torture also have high levels of mental disorder. A community clinic based survey of recently resettled Vietnamese refugees in Norway estimated a point prevalence of depression of 17% and PTSD of 10 %.[13] This survey used both self-rating instruments and structured interviews for PTSD and depression. Another study of depression in Vietnamese refugees, 16 years of age or older and resident in the United States for under two months, was conducted in 10 community clinics in the western United States. The study used the Vietnamese Depression Scale, an instrument developed by Kinzie, et al. that was designed to measure point prevalence of depression.[14] Six percent of subjects met criteria for depression.[15]

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The war in Bosnia during the mid-1990s forced many from that country to seek countries of refuge. A sample of 533 Bosnians living in a refugee camp in Croatia was studied by Mollica et al. using several self-rating instruments modified for an interview format.[16] These measures included the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25. The Harvard Trauma Scale is designed to measure one-week prevalence of PTSD; the Hopkins Symptom Checklist-25 is designed to measure one-week prevalence of anxiety and depression. Torture was experienced by 18% of the respondents. Forty percent of respondents reported symptoms of depression and 26% reported symptoms of PTSD. Seventy-nine percent of people with PTSD symptoms also had depressive symptoms.

RUSSIAN-SPEAKING REFUGEES

The largest refugee group to resettle in the United States during the 1990s were Russian-speaking refugees. Most of these refugees are either or Jewish or Pentecostal because Russian-speakers of either faith are specifically cited in the Immigration and Naturalization Service list of qualifications for obtaining refugee status. The burden of mental disorder among this group has yet to be defined.

A sample of Russian-speaking Jewish refugees presenting at a primary care clinic in New York City was screened for symptoms of depression using an interview instrument - a 25-item version of the Hamilton Depression Scale.[17] Fifty-seven people were screened and

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53% met criteria for depression. The majority of subjects (94%) were not working though they had been in the United States for one or more years.

The Talbieh Brief Distress Inventory has been used to screen Russian-speaking immigrants in Israel. The Talbieh Brief Distress Inventory is a 24-item self-rating instrument for symptoms during the past month on six scales: obsessiveness, hostility, sensitivity, depression, anxiety, and paranoid ideation.[18] A community study of 60 subjects in Israel had a level of 'distress' between 13% and 24% for the first three years following resettlement.[19]

These studies and experience with other refugee groups suggests that the prevalence of depression and possibly other mental disorders is higher among refugees than the United States population as a whole. However, it is likely that the specific illnesses among Russian-speaking refugees and immigrants differ from those of the Cambodian, Vietnamese, and Bosnians because of cultural differences and the different nature of the threats and persecutions faced in their countries of origin. The Cambodian, Vietnamese, and Bosnian refugees all come from countries with considerable violence, torture, and persecution. Russian-speaking refugees have, for the most part, not been exposed to the level of physical trauma experienced by many other refugee populations. They have been threatened with religious persecution including imprisonment, harassment, and limitation of their educational and career opportunities.

If a significant problem exists, not knowing the extent of mental disorders in the population makes diagnosis and appropriate treatment less likely because primary care providers will be less alert to these conditions. A study of New York State mental health referrals suggested that the medical providers identified fewer mental disorders among Russian-speaking refugees than other refugee groups. Of all Russian-speaking refugees receiving psychiatric care from the New York State mental health system in 1995, a health or mental health facility referred only 9.3%.[20] The rest of the referrals were made by non-medical social service agencies or were self-referrals. During that same period in the New York State mental health system, health or mental health facilities made 40.2% of all referrals for non-Russian-speaking refugees.

The Portland, Oregon metropolitan region - along with New York City, San Francisco, and Los Angeles - is a major center of Russian-speaking immigrant and refugee resettlement. Between 1994 and 1998 over half of the 8000 refugees who settled in the Portland metropolitan area's Multnomah County were Russian-speaking. Most of these Russian-speaking refugees came from Ukraine. Of the 1441 Russian-speaking refugees entering Oregon in 1998, 63% were from Ukraine, 13% were from Russia and 6% from Moldova (US Federal and Oregon State statistics). These Russian-speaking refugees joined the existing population of approximately 50,000 Russian-speaking immigrants and refugees in the Portland metropolitan region.

Despite the sizable Russian-speaking population in Portland, Oregon and the possible health and mental health needs of this population, little work has been done to

characterize their needs. Encounter records from the Multnomah County Health Department primary care clinics show a low level of diagnosis of mental disorders among recently resettled Russian-speaking refugees.

The Multnomah County Department of Health runs a system of primary care clinics that provide primary medical care to more than 95 % of all refugees entering Multnomah. The first contact most refugees have with the Multnomah County Health System is a required immigration physical examination. The majority of refugees return for additional contacts with a primary care physician – among Russian-speakers, 99% had at least one more encounter and 86% had two or more additional encounters.

Each encounter with the Multnomah County Health Department primary care clinics is recorded on an encounter form that includes patient identifying information, age, gender, refugee status, date of entry into the United States, language spoken by the patient, *International Classification of Diseases* (ICD-9) codes, and *Current Procedural Terminology* (CPT-4) codes. These encounter forms are entered into a central Multnomah County Health Department database.

Encounters occurring from July 1994 to October 1998 and entered in the database were filtered for a subset containing only those encounters with patients identified as 'refugee.' During that period, approximately 8000 refugees received health care from the Multnomah County Health Department. I analyzed this subset for the recorded prevalence of ICD-9 mental health codes for each of three main refugee groups and then

compared this prevalence to published studies on these refugee groups. The following codes were selected: PTSD, 309.81; anxiety, 300.00, 300.01, 300.02, 300.10, 309.9, and 309.24 (anxiety state not otherwise specified, panic disorder, generalized anxiety disorder, adjustment reaction-not otherwise specified, and adjustment reaction with anxious mood); and depression, 296.20, 296.22, 296.23, 296.32, 296.33, 296.35, 296.7, 296.89. 309.0 and 311 (depressive psychosis-unspecified, depressive psychosis-moderate, depressive psychosis-severe, recurrent depressive psychosis-moderate, recurrent depressive psychosis-severe, recurrent depressive psychosis-partial remission, bipolar affective not otherwise specified, manic-depressive). Table 2 presents the results.

Table 2
Percentage of refugee patients diagnosed and number diagnosed over total number seeking care.
Multnomah County 1994 - 1998 versus reported in literature.

	Multnomah County %	Literature %
PTSD		
Russian-speaking	0.14% (5 / 3600)	n/a
Vietnamese	0.95% (13 / 1370)	10% (a), 3.5 % (b)
Bosnian	2.8% (18 / 640)	17.5% (c), 26% (d)
Anxiety		
Russian-speaking	2.1% (77 / 3600)	n/a
Vietnamese	2.6% (36 / 1370)	2.3% (e), 3.0% (f)
Bosnian	5.0% (28 / 640)	
Depression		
Russian-speaking	1.8% (53 / 3600)	13 - 24 % (g), 53% (h)
Vietnamese	4.1% (56 / 1370)	17% (i), 17% (j), 6% (k), 8.5% (l)
Bosnian	4.8% (31 / 640)	20.9% (m), 40% (n)

a) Point prevalence in a community sample of refugees resettled to Norway for less than six months.[11]
b) Point prevalence among newly arrived refugees in San Francisco.[21]
c) One-week prevalence in a sample of residents at a refugee asylum center in Sweden.[22]
d) One-week prevalence in a sample of residents at a refugee camp in Croatia.[15]
e) Point prevalence of generalized anxiety among refugees newly arrived in Norway.[11]
f) Point prevalence among refugees newly arrived in San Francisco.[20]
g) One-month prevalence in a community sample of refugees resettled in Israel for less than 3 years.[17]
h) Point prevalence in a primary care sample of older individuals in New York City.[16]
i) Point prevalence in a community sample of refugees resettled to Norway for less than six months.[11]
j) Point prevalence in a primary care sample in the United States.[23]
k) Point prevalence in a primary care sample from 10 clinics in the western United States.[14]
l) Point prevalence of major depression or dysthymic disorder among newly arrived refugees in San Francisco.[20]
m) One-week prevalence in a sample of residents at a refugee asylum center in Sweden.[21]
n) One-week prevalence in a sample of residents at a refugee camp in Croatia.[15]

Considerable variation exists from study to study, yet each published estimate is higher than that recorded in the Multnomah County encounter forms. The averages of reported prevalences for PTSD in Vietnamese and Bosnian refugees are both roughly ten-fold higher than the encounter form prevalences for these groups. The average reported prevalences of depression in Vietnamese and Bosnian are respectively three-fold and eight-fold higher than the encounter form prevalences. If similar discrepancies exist in

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the Russian-speaking refugee population a reasonable estimate for prevalence of PTSD may be 1.4 % and for depression 3 to 12 %.

SCREENING INSTRUMENTS

Measurement of the population prevalence of mental disorders requires a reliable means of screening. The following need to be considered in choosing a screening instrument: disorders screened, format, length, and reliability. Anxiety, PTSD, and depression are more common among studied refugee populations than in the general population. Some immigrants and refugee groups also have increased prevalences of adjustment reaction and general psychological distress. Other mental disorders may also be elevated among refugees but have not been extensively studied. Elevated levels of schizophrenia have been reported in some psychiatric clinic populations of refugees.[24]

The three mental disorders that are most frequently elevated in community samples of refugees and that have the most distinct diagnostic criteria are PTSD, generalized anxiety, and depression. The majority of published research relating to refugee mental health focuses on these three illnesses, and national prevalence studies include each of these illnesses but do not include adjustment reaction or general psychological distress. Thus the prevalence of PTSD, generalized anxiety, and depression are logical to study because comparisons with existing data is possible.

There are two broad categories of mental health screening: interview and self-rating. Each type has strengths and weaknesses.[25] Interviews can increase response rates to

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questions, although certain sensitive questions may not obtain as truthful a response and interviews require a trained individual fluent in the language of the interviewee.

Self-rating questionnaires are less dependent on interviewer bias and may be less threatening. They suffer from the problem of requiring that subjects be literate.

Available instruments vary in length from several thousand questions to just a few. Numerous screening instruments have been developed for depression, anxiety, and PTSD. Some are for specific populations such as veterans or the terminally ill. Others are less narrowly targeted - some of have been adapted for use in multiple cultures and languages. Those that have been translated and used for published studies include several interview instruments – the Hamilton Depression Scale and the Goldberg Anxiety and Depression Scale – and several self-rating instruments – the Beck Hopelessness Scale and the Beck Depression Inventory. No studies have been published that used a Russian-language PTSD instrument or self-rating depression instrument.

Instruments that have been translated and used widely in diverse populations include the Hopkins Symptom Checklist (HSC) for anxiety and depression, Harvard Trauma Questionnaire (HTQ) for PTSD, and the CIDI for a full range of mental disorders including anxiety, depression, and PTSD. The HSC and HTQ measure presence of symptoms during the preceding week. The CIDI measures presence of symptoms during the preceding year. The HSC and HTQ have been used in refugee and displaced populations including Bosnians, Vietnamese, and Cambodians. A modified CIDI was

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used for the National Comorbidity Survey. The HSC, HTQ, and CIDI are based on the diagnostic criteria provided by the DSM-III-R.

The adaptation of any one of these instruments for use in another culture and in another language raises several questions. The first is the cross-cultural applicability of Western diagnostic criteria for psychiatric disorders or quality of life. The second is the equivalence of questionnaires developed in one language and translated into another. There is evidence of cross-cultural applicability of depression, anxiety, and PTSD. A study of the factor structure of PTSD symptoms in Cambodian refugees found a high degree of correlation with Caucasians.[26] Similar physiological responses have been reported for individuals from separate cultures diagnosed with PTSD such as an elevated resting heart rate.

Cross-cultural applicability of a diagnosis does not eliminate the possibility that symptoms may differ between cultures. Emotional and cognitive variation may cause varied expressions of the same syndrome. Depression is ubiquitous around the world but symptoms may not be. Consequently, the presence of the disorder may be overlooked in screening because of the use of culturally inappropriate diagnostic criteria. One way to minimize this problem with screening instruments is to start with the concept of the disorder and identify culture specific diagnostic markers through careful research on the culture. The Vietnamese Depression Scale was developed this way.[12] A second approach is to adapt an existing instrument to a different culture and language. A standard set of procedures for cross-cultural adaptation has been proposed by Flaherty et

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al. and Guillemin et al..[27],[28] This begins with instrument selection. The best instrument to start with is one that has already been proven in other situations to be cross-culturally equivalent. The next step is to achieve semantic equivalence through multiple translations and back-translation. Conceptual equivalence implies that the instrument is measuring the same basic constructs in separate cultures. This can be evaluated by assessing the agreement of the instrument with an independent measurement technique, such as a clinical psychiatric examination.

The HSC and HTQ have been adapted for use and tested in several cross-cultural populations. The sensitivity and specificity were measured for three South-East Asian language versions, Vietnamese, Cambodian, and Laotian.[29] Sensitivity and specificity were reported for the three versions combined. Sensitivity and specificity of the HSC depression sub-scale was 88% and 73% and for the HTQ, 78% and 65% respectively versus clinical psychiatric evaluations.

SUMMARY

The conditions that refugees and immigrants are leaving and the process of migration predisposes some populations to increased levels of mental disorders. Russian-speaking refugees and immigrants are among the largest immigrant groups to settle in the United States during the 1990's. Little is known about the specific mental health needs of Russian-speaking refugees except that the overall level of diagnosis of mental disorders in primary care clinics is low. By adapting available English versions of psychiatric survey instruments, I wish to test the hypothesis that Russian-speaking immigrants suffer

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from mental disorders at a rate significantly higher than the overall United States population.

OVERVIEW

The goal was to create an instrument designed to assess generalized anxiety, PTSD, and depression as well as quality of life and religiousness, and basic demographics for Russian-speaking individuals. The long-range purpose of the instrument is to test the hypothesis that mental disorders among Russian-speaking immigrants in Multnomah County, Oregon are under-recognized and have a higher prevalence than the United States mean. The procedure for each step of instrument development is based on methods previously used by other investigators in cross-cultural psychiatry. The methods proposed by Flahery et al. and Guillemin et al. cover each step of the development process: (a) cross-cultural adaptation, (b) translation, (c) pre-testing, and (d) analysis of validity, reliability, and internal consistency.[26, 27] Validity describes how representative questions on the instrument are of the concepts they are intended to reflect. For example, how well the questions related to depression symptoms truly reflect the psychiatric diagnosis of depression. Reliability describes the stability - reproducibility - of a measurement when essentially the same results are expected - such as when a single subject completes the instrument multiple times or multiple subjects with the same mental disorders each complete the instrument once. Internal consistency refers to the uniformity of a set of questions in describing the same concept. High internal consistency implies that all questions relating to a specific concept will be answered in a similar fashion. Internal consistency is traditionally estimated by the ratio of variances called Cronbach's alpha or coefficient alpha.

This method for cross-cultural adaptation has also been used in several other projects, including the adaptation of the Harvard Trauma Scale for Vietnamese, Laotian, Cambodian, and Bosnian populations.[28, 15] The analysis will provide information on the comparability of the Russian instruments with their English-language equivalents.

The project was approved by the Oregon Health Sciences University Institutional Review Board.

DESIGN

Step 1: Cross-cultural adaptation

I choose to start with the Harvard Trauma Scale, Hopkins Symptom Checklist, and Short Form Health Survey - 12 (SF-12) because of their use in multiple cross-cultural settings and translations. The SF-12 is widely used for assessing physical and mental quality of life. It has been adapted for a large number of languages, although a Russian version is not available.

To these scales, I added questions regarding age, gender, level of education, current employment, length of time in the United States, and religiosity. The Duke Religion Index is a five-item scale designed to capture the major aspects of the importance of religion in an individual's life.[30] I adapted two questions from this scale.

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To understand the cultural context, I assessed the experience of Russian-speaking immigrants in their countries of origin, during emigration, and in the United States through unstructured interviews conducted in houses and Russian Pentecostal churches and by consulting Russian-speakers who work with Russian-speaking immigrants. (These subjects were not included in the analysis.) I used this data to make culturally relevant adaptations to the SF-12, Hopkins Symptom Checklist, and the Harvard Trauma Scale. Specifically, I sought to determine the range of traumatic experiences that occurred in the country of emigration, the reasons behind these experiences, and difficulties encountered in adapting to the United States. I also discussed home and recreational activities. From the latter discussion, I changed question 2a of the SF-12 Health Survey from "Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf" to "moderate activities, such as moving a table, pushing a vacuum cleaner, or walking two blocks." This modification was made because none of the Russian-speakers interviewed had participated in either bowling or golf. I also adapted the trauma exposure questions to reflect the major traumatic exposures reflected through the unstructured interviews - religious persecution and combat in Afghanistan. Two questions regarding religious persecution and one question regarding riots or mob violence were added while questions regarding lack of shelter and brainwashing were removed. PTSD symptom questions were reduced from the 30 Harvard Trauma Questionnaire questions to the 16 questions with intent most closely reflecting DSM-IV criteria for PTSD. Questions of feeling guilt for having survived, feeling someone trusted has betrayed you, and being told by someone you have done something you can not remember, feeling as in you are going crazy and feeling ashamed

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of the hurtful or traumatic events that have happened to you were among the omitted questions. No significant changes were made in the Hopkins Symptom Checklist. I reviewed the questions on the English version with Dr. David Kinzie, an intercultural psychiatrist, and Dr. Solomon Wolf, a psychiatrist specializing in Russian-speaking patients. The final version of the Russian instrument and it English translation are included in Appendix B.

Step 2: Translation into Russian

Two individuals with Russian-as-a-first-language independently translated the English version of the instrument based on instructions to translate 1) at a sixth-grade level and 2) based on intent of questions to identify the presence of specific symptoms rather than the wording of the English-language original. Translators were identified with experience with health or psychology. The two versions were then reviewed by one of the translators and merged into a single draft that was reviewed by Dr. Wolf for integrity with the targeted mental disorders. An individual uninvolved in the original translations then back translated this draft. The draft was further modified based on the back translation.

Step 3: Pretesting for comprehension.

The draft was tested on a convenience sample of ten educated Russian-speaking adults. This process was extremely revealing, identifying numerous confusing and ambiguous questions. One of the translators, Larissa Bressler, created a final draft by rewriting and re-testing questions on three Russian-speaking individuals. Solomon Wolf and the

Russian Clinic psychiatric nurse, Dmitriy Rakhlin, reviewed this draft and made minor final changes.

Step 4: Testing for validity, reliability, and internal consistency

Subjects were recruited from the International Psychiatric Program Russian Clinic at OHSU by the psychiatric nurse. This program is an adult psychiatry clinic with approximately 90 patients. Solomon Wolf is the primary psychiatrist. Potential subjects were identified by the following criteria: Inclusion criteria were clinic patients aged greater than eighteen. Exclusion criteria were (1) psychosis as diagnosed by a psychiatrist, (2) organic brain disease (severe cognitive impairment) (3) judgment by the patient's psychiatrist that participation may in any way cause undue anxiety or any other harm, and (4) lack of Russian written literacy.

During regularly scheduled clinic visits, potential subjects were invited to participate, informed of the goal of the study, the potential use of the questionnaire, drawbacks to participating, and remuneration for participating. They were clearly informed that declining to participate would not affect the care they receive from OHSU. Potential subjects were also asked to read an Information Sheet. A signed informed consent form was not required for this study in accordance with the *Code of Federal Regulations* Part 46 Section 117 (c) (1) (CFR 46.117c(1)). Subjects completed questions at the Adult Psychiatric Clinic at OHSU and required between twenty and thirty minutes to complete the instrument - usually following their clinic appointment. Subjects were given ten dollars in return for their time. Despite encouragement by both the psychiatrist and the

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psychiatric nurse, many patients declined to participate. The number and reason for refusal were not recorded.

Questionaries were placed in envelopes and patient medical record number was recorded on the envelopes. No identifying information was placed on the form. David Kinzie identified established mental health diagnoses and other significant physical diagnoses by chart review and recorded on a separate paper both the diagnoses in the chart and evidence from the chart of depression, anxiety, or PTSD.

Step 5. Recruitment of community subjects from Russian Oregon Social Services (ROSS) Russian Oregon Social Services is a project of the Ecumenical Ministries of Oregon that provides social services including community orientation, agency referrals, English classes, domestic violence counseling, and citizenship preparation for Russian-speaking immigrants. Inclusion criteria for participation were individuals age greater than eighteen who either received services from or worked at ROSS. The director of ROSS, Yelena Sergeyeva, administered the instrument to clients over a two-month period. ROSS was provided with a contribution to cover costs for refreshments to encourage clients to take the time to complete the instrument.

ANALYSIS & INTERPRETATION

(a) Analyses

Data from questionnaires was double-entered using EpiInfo 6 (CDC). After reviewing original records for inconsistencies between the entries, the data was transferred to SPSS Version 10 (SPSS Inc.) for analysis.

The analysis includes a table comparing demographics between clinic and community samples. The internal reliability of each of the constructs, physical and mental well being from the SF-12, PTSD, anxiety, depression, and religiosity were evaluated using the alpha coefficient (Cronbach's alpha). The SF-12 physical score (PCS) and mental score (MCS) were calculated for each patient using the American English algorithm published by Quality Metric. This algorithm has also been applied, with good correlation, to Western European SF-12 calculations. Further comparisons include Mann-Whitney tests of means of SF-12 scales and PTSD, anxiety, and depression scales. The Mann-Whitney test statistic was selected because it does not assume Gaussian distribution of the data. Histograms visually depict the distribution of scores for community and clinic cohorts for PTSD, anxiety, depression, and the SF-12. Initially, I also planned to compare PTSD, anxiety, and depression scale results between subjects with and without each diagnosis using receiver operating characteristic curves and two-by-two tables to identify optimal cut-points and test cut points developed for other languages on the Russian version for the sensitivity, specificity. The small sample with PTSD, anxiety, or depression eliminated this analysis.

Demographic factors and religiosity are expected to correlate with SF-12 indices. Gender, age, time in the United States, education level, working, and religiosity were tested in univariate and multivariate analysis as predictors of SF-12 indices.

Descriptive Statistics

Seventeen Russian Clinic patients agreed to become subjects. This is less than half of the eligible clinic population. Reason for refusal was not obtained. Refusal was not anticipated to influence the results because the study population was not designed to extrapolate sample prevalence on a population. I obtained a convenience sample of forty-two Russian Oregon Social Services (ROSS) clients and staff. Number and reasons for refusal by ROSS clients were not recorded, but the total number of refusals was reported to be low. Of the combined population, thirty-five subjects answered every question, 25 subjects omitted 1 to 10 answers, and one subject - a clinic subject - was unable to complete large sections of the questionnaire.

Table 3: Demographics of community and clinic cohorts.

	Community	Clinic	P value
Number of subjects	42	17	
Male Gender (%)	13 (31%)	6 (35%)	NS*
Mean Age (sd)	43.5 (16)	55.9 (16)	0.014**
Age range	18 - 71	17 - 75	
9 + years schooling (%)	35 (83%)	14 (82%)	NS*
> 2 years in US (%)	32 (76%)	15 (88%)	NS*
Employed (%)	25 (60%)	1 (6%)	0.001*

* Chi-square, ** Student's t-test
NS = not significant ($p \gg 0.05$).

Table 3 shows the demographics of community and clinic samples. The two populations differed in age and employment. Clinic subjects were, on average, 12 years older and only one worked outside the home. Table 4 shows the psychiatric diagnoses of the clinic subjects.

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Table 4: Psychiatric diagnoses of 16 clinic subjects as determined by review of their medical records

	Count (% of clinic subjects)
Depression	8 (47%)
Anxiety	0
Post traumatic Stress Disorder	5 (29%)
Adjustment Disorder	3 (18%)
Bipolar	2 (12%)
Psychosis	1 (6%)

Note: (1) Some subjects have multiple diagnoses.
(2) Medical records were unavailable for 1 subject.

Internal Consistency

I evaluated internal consistency of the SF-12 mental and physical constructs, the two-item religiosity scale, and the three psychiatric constructs - post traumatic stress disorder (PTSD), anxiety, and depression - with the coefficient alpha (Cronbach's alpha) (See Table 5.).[31] Higher coefficient alphas reflect a greater correspondence between the observed variance in the set of items versus the 'true-score' variance for items with complete internal consistency.

Table 5: Internal consistency with coefficient α between items in a construct - all 59 subjects. These results demonstrate a high level of internal consistency among items on the mental disorder scales.

Construct	Coefficient α
SF-12 12 item physical component	0.6997
SF-12 12 item mental component	0.6603
PTSD scale (16 items)	0.9461
Anxiety scale (10 items)	0.9226
Depression scale (15 items)	0.9414
Religiosity (2 items)	0.7906

PTSD

Exposure to trauma and experiencing symptoms associated with PTSD was significantly increased among clinic versus community subjects (see Table 6).

Table 6: Mean scores, standard deviation (σ), and median scores of symptom scales for PTSD, anxiety, depression, and exposure to trauma - community versus clinic with test of significance.

Scale	Community Mean (σ)	median	Clinic (All) Mean (σ)	median	P value*
Trauma events	1.4 (1.4)	1.0	3.1 (2.2)	3.0	0.004
PTSD	0.59 (0.56)	0.42	1.24 (0.60)	1.3	0.001
Anxiety	0.55 (0.49)	0.50	1.25 (0.63)	1.2	0.000
Depression	0.59 (0.57)	0.33	1.16 (0.56)	1.2	0.002

* Mann-Whitney (2-tailed)

The difference in trauma and PTSD scale scores was even greater when the five clinic subjects diagnosed with PTSD were compared with the combined community and non-PTSD clinic subjects (see Table 7). The difference in symptom score is illustrated by comparing histograms of subjects with and without a known diagnosis of PTSD (Figure 1).

Table 7: Mean scores and standard deviations (σ) of symptom scales for PTSD, depression, and exposure to traumatic events - subjects with condition diagnosed versus those without the diagnoses. The trauma exposure scale compares subjects with PTSD with all others.

	Not diagnosed Mean (σ)	Median	Diagnosed Mean (σ)	Median	P value*
PTSD (5 subjects)	0.70 (0.60)	0.59	1.6 (0.46)	1.7	0.002
Trauma events (PTSD diagnosed)	1.56 (1.51)	2.0	5.40 (1.67)	5.0	0.000
Depression (8 subjects)	0.71 (0.63)	0.53	1.04 (0.38)	1.00	N.S.

* Mann-Whitney (2-tailed)
N.S. = not significant (p >> 0.05)

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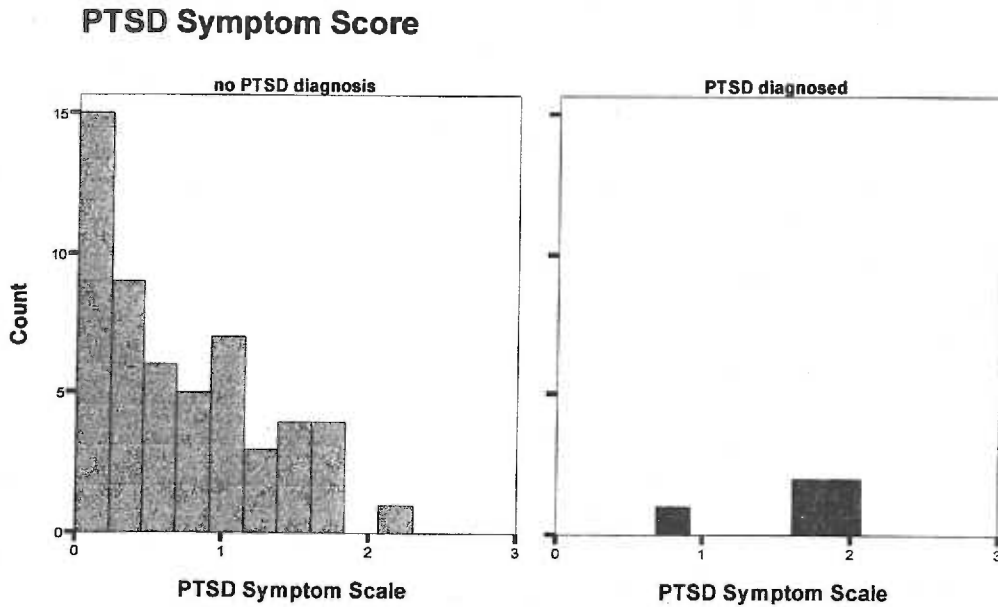
PTSD Symptom Score

Figure 1: Histograms of PTSD symptom score., subjects without PTSD diagnosis versus those with a diagnosis of PTSD. The 'no PTSD diagnosis' histogram shows lower symptom scores when compared with the 'PTSD diagnosed' histogram, although the no PTSD scores overlap the PTSD scores.
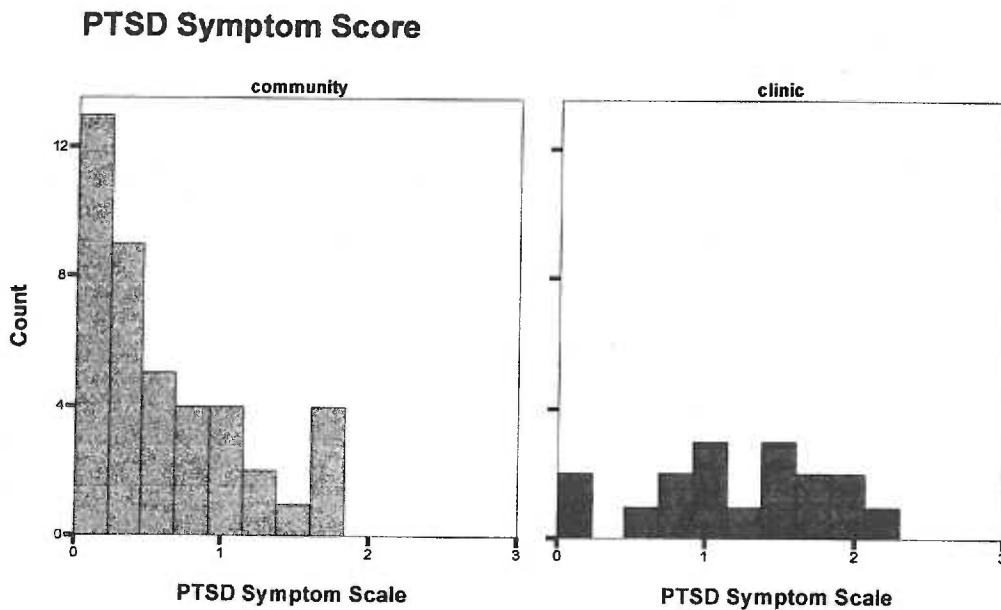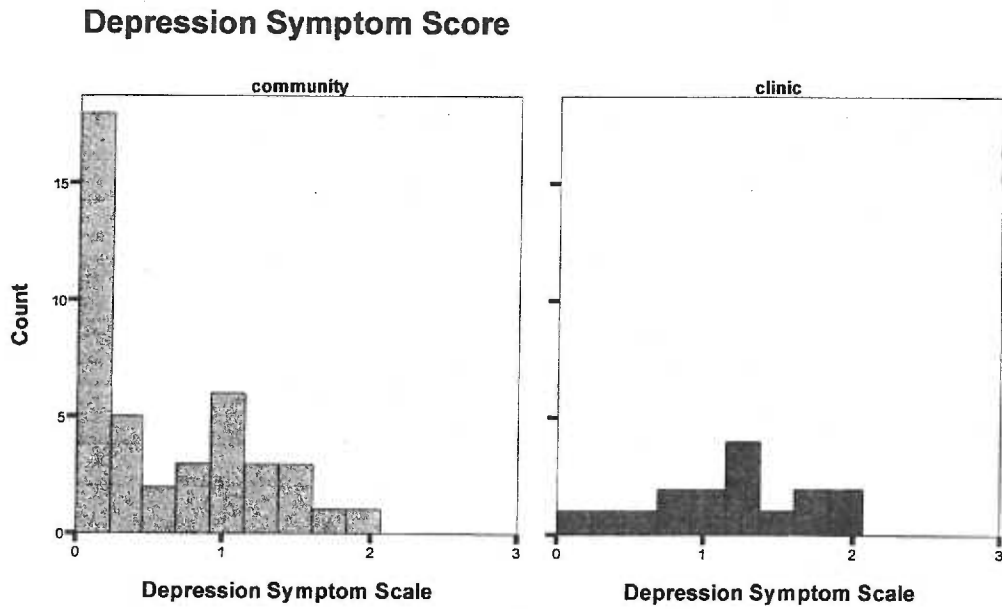
PTSD Symptom Score

Figure 2: Histograms of PTSD symptom score, community subjects versus clinic subjects. Clinic patients have a symptom score higher than community subjects.

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Depression

The mean on the depression scale differed significantly between community and clinic samples (see Table 6). The difference in means was not statistically significant ($p = 0.145$) when subjects with and without the diagnosis of major depression were compared (see Table 7). The histograms of depression scale scores for community and clinic subjects and subjects diagnosed and not diagnosed with major depression demonstrate the distribution (see Figure 3 & Figure 4).

Depression Symptom Score
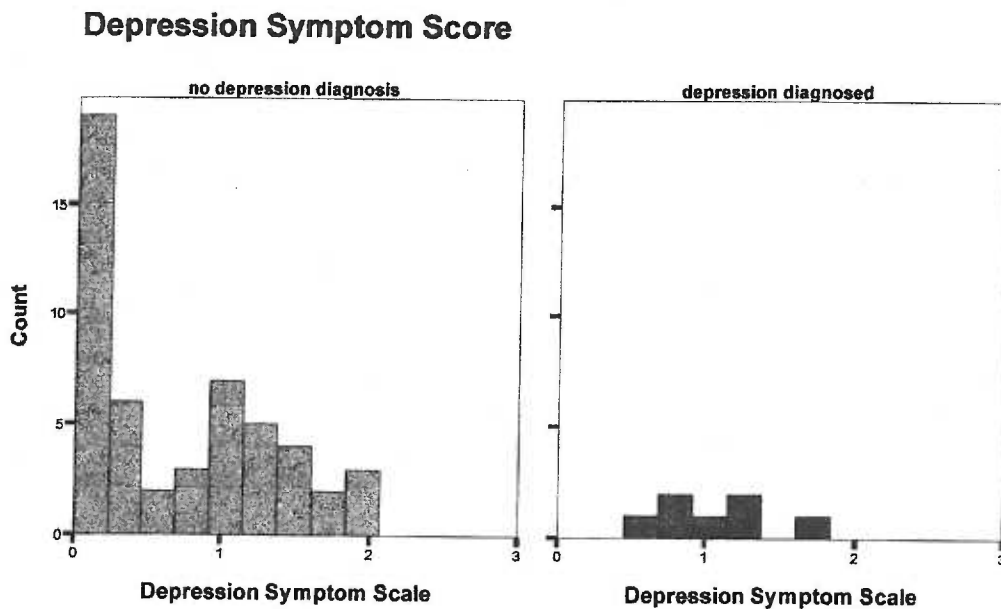
Figure 3: Histograms of depression symptom score, no diagnosis of depression versus subjects diagnosed with depression. Although mean symptom score is higher among those with diagnosed major depression, there is total overlap of individual subject scores.

Depression Symptom Score

Figure 4: Histograms of depression symptom score, community versus clinic subjects.

Anxiety

No patients were diagnosed with generalized anxiety disorder among the clinic patients although the greatest difference in mean scores between community and clinic patients was on the anxiety scale (see Table 6). The following histograms compare the anxiety scale between community and clinic subjects (see Figure 3).

Anxiety Symptom Score
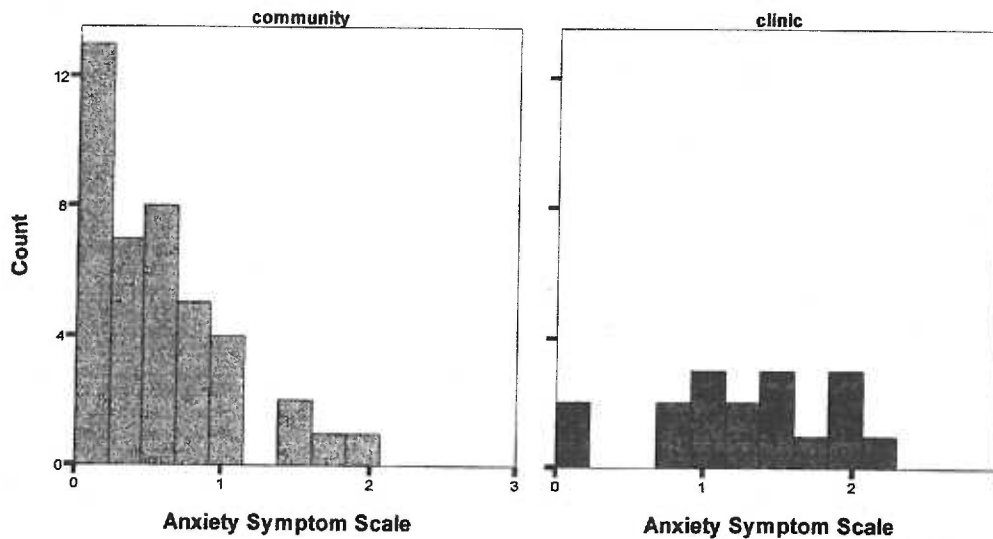
Figure 5: Histograms of anxiety symptom score, community versus clinic subjects.

SF-12 Analysis

The clinic subjects scored significantly lower on both the PCS and MCS reflecting

poorer physical and mental function (see Table 8).

Table 8: Mean SF-12 scores, standard deviations (σ), and median scores with United States cross-section, community, clinic, and test of difference between community and clinic means.

	United States Mean (σ)	Community Mean (σ)	Median	Clinic Mean (σ)	Median	P value*
PCS 12 Mean	50 (10)	47.9 (10.7)	52.2	34.2 (8.6)	31.3	0.000
MCS 12 Mean	50 (10)	44.0 (13.2)	47.2	33.9 (8.4)	33.2	0.009

* Mann-Whitney (2-tailed)

Physical Component Score
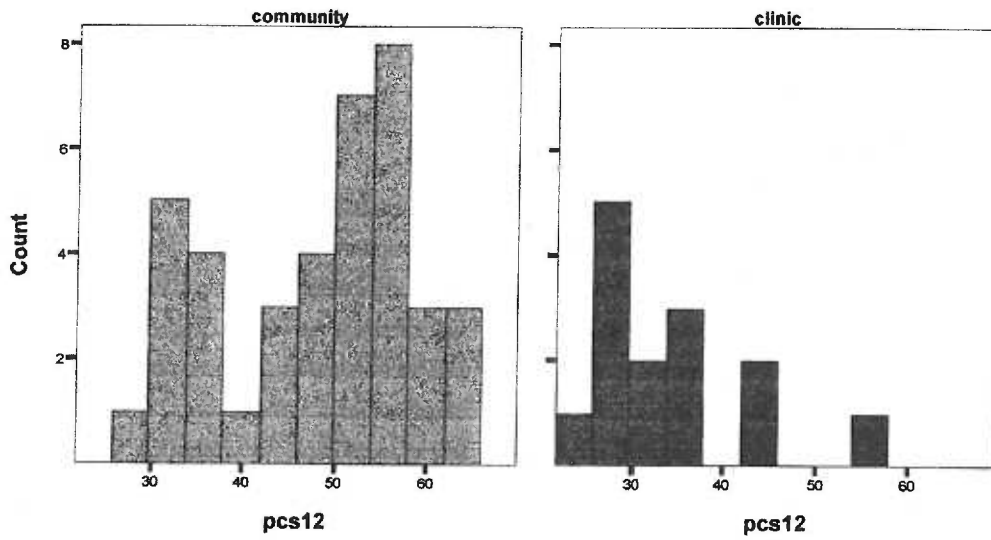
Mental Component Score
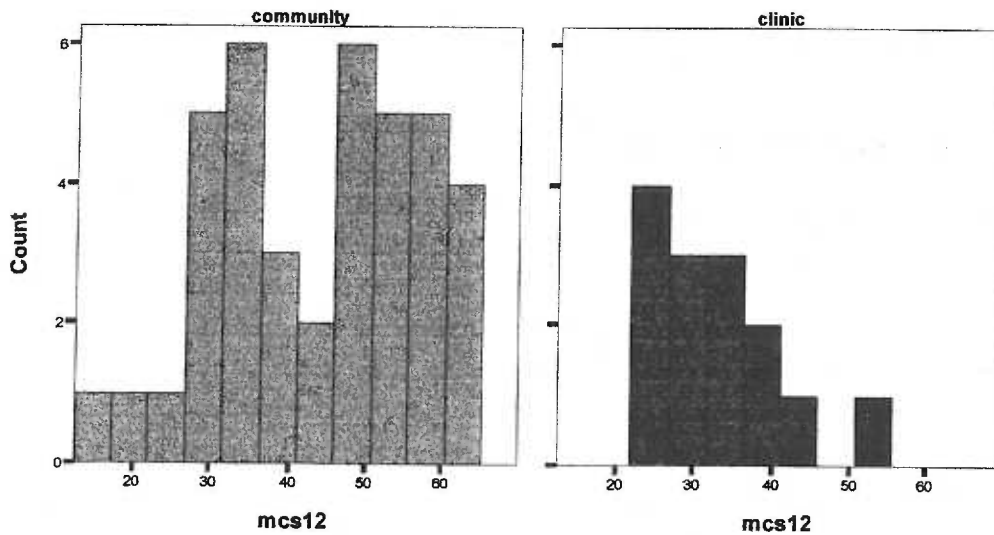
Figure 6: Histograms of PCS and MCS, community versus clinic subjects demonstrating lower scores (poorer function) among clinic subjects.

I evaluated demographic factors for predicting PCS and MCS after dichotomizing the

linear and ordinal variables of age, time in the United States, importance of faith, and

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frequency of seeking advice from religious figures. I used 50 years of age as a dividing line for age as a convenient point that provided two similarly sized samples (29 subjects less than 50 and 26 subjects equal to or greater than 50 years of age). Combining both community and clinic populations, I used the Student's t-test to evaluate gender, employment, community cohort, and the dichotomized variables as predictors of SF-12 PCS and MCS. Employment and being part of the community cohort are the only predictors of higher mental scores. Employment, younger age, community cohort, and lower religiosity are predictors of higher physical scores (see Table 9).

I modeled all significant predictors of the PCS and MCS from univariate analysis in multivariate linear regression. In the best-fit model for MCS, clinic subject remained significance as a predictor (adjusted R square = 0.129); whereas, employment became non-significant in the model.

In modeling predictors of PCS, I used age as a continuous variable for linear regression and confirmed linearity using the Box-Tidwell transformation technique for assessing major deviations from linearity.[32] After initial model building, I identified significant outliers by plotting the Cooks D value versus standardized predicted values. The point plotted for one subject was an outlier suggesting that subject contributed disproportionately to regression statistics - I removed the subject from further models.

Table 9: Univariate predictors of higher physical component score (PCS) and mental component score (MCS)

	PCS-12*	MCS-12*
Community subject	P = 0.000	P = 0.009
Male gender	NS	NS
Age < 50	P = 0.000	NS
Living in US > 2 years	NS	NS
Employed	P = 0.005	P = 0.032
Faith unimportant	P = 0.048	NS
Do not look to church for advice	P = 0.000	NS

*Mann-Whitney (2-tailed), NS = not significant (p >> 0.05)

The final linear model, built through forward selection, identified younger age and community cohort as significant predictors of higher PCS scores (see Table 10). Beta for the predictor variable 'age' does not vary significantly between clinic subjects (-0.33) and community subjects (-0.35) when analyzed separately. The adjusted R-square for this model is 0.56 and significance p = 0.000. A scatter plot represents the distribution of PCS versus age for both community and clinic subjects (see Figure 6).

Table 10: Multivariate linear regression model of predictors of physical component score (PCS)

	Unstandardized Coefficient Beta (std error)		Coefficient Beta	t	P value
Constant	63.4	(3.46)		18.3	0.000
Age	-0.38	(0.076)	-0.37	-5.04	0.000
Clinic Subject	-7.9	(2.85)	-9.1	-2.78	0.002

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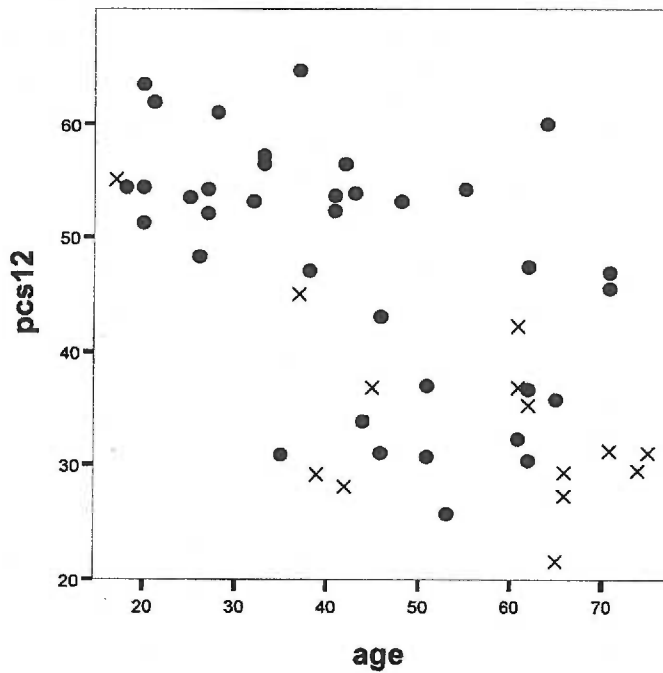
Figure 7: Scatter plot of PCS versus age. Circles represent community subjects, x's represent clinic subjects. This plot graphically shows the trend described by the regression equation.

Intercorrelation

The four scales of mental disorders and mental health are significantly correlated (see Table 11). The PTSD scale has a correlation of 0.90 with the anxiety scale. PTSD, anxiety, and depression scales have correlations between -0.677 and -0.745 with the MCS-12. The negative correlation arrises because higher scores in the MCS-12 indicate better functioning. The PCS-12 has the lowest overall correlations with the other scales and is not significantly correlated with the MCS-12.

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Table 11: Pearson correlations between scales for PTSD, anxiety, depression, physical component score (PCS), and mental component score (MCS) with test of significance.

		Anxiety Symptom Scale	Depression Symptom Scale	PCS-12	MCS-12
PTSD Symptom Scale	Pearson Correlation	0.900	0.832	-0.428	-0.745
	P value	0.000	0.000	0.001	0.000
Anxiety Symptom Scale	Pearson Correlation		0.870	-0.437	-0.677
	P value		0.000	0.001	0.000
Depression Symptom Scale	Pearson Correlation			-0.436	-0.740
	P value			0.001	0.000
PCS-12	Pearson Correlation				0.267
	P value				0.053

I developed an instrument for population surveys among Russian-speaking immigrants. This instrument included components designed to evaluate physical and mental well being, PTSD, anxiety, and depression. Such an instrument is necessary to begin population-based evaluation of mental disorders and mental health needs within this population.

Internal consistency is an indicator of how well responses to a set of questions correlate with each other. The minimum alpha coefficient recommended by Nunnully and used as the target for developing the Arabic version of the SF-12, is 0.7.[30, 33] My analysis showed subject responses to be internally consistent within each of six measurement scales: PTSD, anxiety, depression, physical component score (PCS), mental component score (MCS), and religiosity. I produced an instrument with internal consistency higher than 0.7 for the PTSD, anxiety, depression, and religiosity scales. Cronbach's alphas for the SF-12 scales, PCS and MCS, scales were slightly less than 0.7. This is similar to results obtained during validation of the SF-36 for other languages. A lower alpha for the physical score was also reported for the validation of an Arabic version of the SF-36 with an alpha of 0.59 and for eight Western European language versions of the SF-36 with alpha scores between 0.68 and 0.94.[32, 34] These results indicate the consistency of questions within each item set to assess a similar concept.

Each of the mental disorder scales had a significantly higher symptom score among clinic subjects than community subjects. This suggests these scales can detect mental disorders. Unfortunately, the total number of subjects diagnosed with each condition was low and precluded more detailed statistical analysis and thorough evaluation of validity.

Even with the small sample of subjects diagnosed with PTSD a cut-point of a score of 1.5 on a scale of 0 to 3 on the PTSD scale is suggested. This recommendation is consistent with the cut point recommended by Mollica et al. for the Indochinese-language versions of the Harvard Trauma Scale.[35] Testing this cut-point for sensitivity and specificity is open to error because of the small sample size and the unknown prevalence of PTSD among the community group.

The instrument did identify a statistically significant elevated level of traumatic events among clinic subjects -- averages of 3.1 versus 1.4. Both of these averages are considerably less than the average of 15.2 traumatic events experienced by the Indochinese refugees evaluated by Mollica et al.[28] This finding among clinic and community samples helps to affirm the widely held belief that, as a group, Russian-speaking immigrants have only a modest exposure to trauma. Consistent with this result is a much lower predicted level of PTSD among Russian-speakers than among South East Asian and Balkan refugees.

The mean anxiety symptom score showed the largest difference between clinic and community subjects of the three mental disorder scales. This result may be surprising

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because none of the clinic subjects was diagnosed with generalized anxiety. One reason is the overlap between anxiety, PTSD, depression and other mental disorders. Another reason is that the diagnostic criteria in the Diagnostic and Statistical Manual (DSM) IV exclude the diagnosis of generalized anxiety if another psychiatric or somatic diagnosis can explain the symptoms (see Appendix A). Patients with PTSD, depression, and adjustment disorders are likely to have a range of symptoms common to generalized anxiety disorder but are not considered for the diagnosis because another disorder has been diagnosed.

The failure to achieve statistical significance between subjects with major depression and those not diagnosed with major depression may due to the nature of the instrument. My standard was major depression diagnosed by a psychiatrist, while the instrument was designed to detect a wide range of depressive disorders. It is likely that a fraction of the community sample included in the non-affected cohort suffered from major depression, adjustment disorder with depression, or dysthymia but had not been evaluated by a psychiatrist.

The small sample size also made a thorough assessment of reliability impossible. Never the less, the trend of psychiatric clinic patients scoring higher on the symptom scores is encouraging that the scales have a degree of reliability.

The SF-12 was originally designed for use by English language speakers in the United States. The algorithm used to compute the physical and mental components was

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developed to reflect a mean of 50 and a standard deviation of 10 for a cross-section of the United States population. The same algorithm has been used in Western European countries, providing a mean and standard deviation near that of the United States population.

The results with the SF-12 are promising for integrity to and scaling of the English version. The mean PCS of the community sample is similar to the US mean of 50 (p value for a test of means is 0.227) and has a standard deviation close to 10. Other findings are similar to those of the American English and other versions of the SF-12: the PCS trends downward with increasing age while the MCS remains relatively constant with advancing age.[33] The lower score on the MCS scale for patients with known mental disorders further supports the validity of this instrument as the psychiatric morbidity of clinic patients is reflected in their scores.

The mean MCS of the community sample is significantly less than 50 (p = 0.007). This finding suggests that immigrants have a physical well being equivalent to the general United States population but a poorer mental well being. A cultural difference in response to questions regarding mental health could also explain this difference.

Evaluating the quality of the instrument with internal consistency, reliability, and validity demonstrates either good performance - with internal consistency, or a trend toward validity and reliability that can not be fully assessed given the limited sample size.

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Limitations

a. Cross-cultural application of the psychiatric constructs

The very work of adapting a psychiatric concept to another culture and language raises

questions.[36,37,38] Western European and American psychiatric advances were long

ignored by the Soviet medical establishment limiting their application among people of

the former Soviet Union. Only recently have Russian mental health workers gained the

opportunity to study and apply the practices of American and Western European

psychiatry. Psychiatric theory was based on adaptations of Freudian psychoanalytic

theories until shortly before the dissolution of the Soviet Union. This same approach was

used in Europe and America, but abandoned several decades ago. The modern Western

approach of using symptom clusters to define distinct psychiatric diagnoses with organic

bases was not taught and the role of the psychiatrist was as an analyst rather than a

clinician. This theoretical underpinning is not consistent with large-scale epidemiology

and may have interfered with psychiatric prevalence studies in Russian-speaking

countries have not been published. Recently, the DSM-IV has been introduced into

Russian-speaking countries and is being embraced for clinical practice and epidemiologic

investigation.

Studies conducted with other immigrant groups in the United States support the cross-

cultural applicability of DSM-IV diagnoses. Cross-cultural validity of PTSD and

depression have been examined in South East Asian populations and found to be

excellent.[39,25,23] Formal studies of cross-cultural validity of modern DSM-IV constructs

have not been undertaken among Russian-speaking populations. My results suggest

applicability of these constructs because of the higher symptom scores among psychiatric clinic patients. The possibility of PTSD, depression, and anxiety manifesting in symptoms not included in the DSM-IV or the instrument remains a possibility. Investigating this is an opportunity for further research.

b. Sample size for analyzing validity

This study is limited by the low number of subjects with PTSD, anxiety, and depression. The small number prevents evaluation of the reliability of the instrument in correctly detecting these conditions. Similar projects, such as a validation of the Harvard Trauma Scale in Vietnamese, Cambodian, and Laotian also suffered from a small sample size. That study reported 55 Cambodians, 20 Laotians, and 16 Vietnamese.[28] However, that study benefited from a complete psychiatric evaluation of all the subjects resulting in less potential for misclassification.

c. Threats to Generalizability

The general applicability of this instrument may be limited because it was tested on the Russian-speaking population of Portland, Oregon. The majority of recently Russian-speaking arrivals in Portland are Pentecostal Christians. It is uncertain how this affects the applicability of the instrument to individuals practicing other religions and non-religious individuals.

d. Gold standard

The validity of the 'gold standard' can be questioned. The psychiatrist making the assessments may fail to diagnose some cases and mis-diagnose others. Additionally the psychiatric diagnoses may undergo measurement drift over time. That is, the way the psychiatrist diagnoses the same symptoms may change over time. In addition, the subjects psychiatric conditions may change over time or respond to therapeutic interventions leading to a reduction in symptoms.

e. Unknown presence of mental disorders among the community sample

Among the 42 community subjects, I would expect several cases of depression, anxiety, and PTSD based on population studies in the United States. Unfortunately, I was not able to evaluate each of the community subjects with a psychiatric evaluation nor did I feel it was appropriate to inquire about mental health counseling or diagnoses given the distrust of official documents and lack of belief in mental illness among many Russian-speaking immigrants. Because of this weakness, some subjects have likely been misclassified as free of a mental disorder.

f. Treatment Effect

Most clinic subjects were enrolled at a follow-up appointment and had already begun a course of therapy for their diagnosis. Consequently, the number and severity of symptoms is likely lower than at the time of presentation. Symptoms of some subjects may have been completely controlled. This is unlikely though, because the nature of

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subject enrollment increased the likelihood that frequently returning patients would be enrolled. These patients are the ones with the least response to therapy.

I have successfully prepared a Russian-language instrument that had a high rate of subject completion among a small sample and good internal consistency, adherence to psychiatric constructs, and evaluation of mental and physical well being. The Russian-language SF-12 appears to perform similarly to the American English version and, after further validation, opens the door to explorations of mental and physical well being among different Russian-speaking immigrant groups. The similarity with the PCS scores on the American English-language version suggests comparability between languages. This permits comparisons between speakers of multiple languages. The findings for the PTSD, anxiety, and depression scales are a useful beginning, but will need further validation with more subjects with each of these conditions and a suitable control group.

Although this project focused on creating and validating an instrument, the low community SF-12 mental component score is an important finding. This result supports the hypothesis that recent immigrants have higher psychological distress than the United States population mean. Further research on a community cross-section is indicated to confirm the distress in this population.

My findings strongly suggest that the mental health needs of Russian-speaking immigrants are equal to, if not higher than, the overall American population. The levels of trauma, and thus expected prevalence of PTSD and comorbid disorders of depression and anxiety, are much lower than among South-East Asian and Bosnian refugees. In

conclusion, the pattern of mental disorders affecting Russian-speaking immigrants is likely different from many refugee groups coming to the United States - Russian speaking immigrants have lower levels of psychiatric disability than these groups, but higher than the United States cross-section. I believe this outcome supports the hypothesis that the Multnomah County Health Department records underestimate the prevalence of psychiatric morbidity among Russian-speakers. Culturally appropriate mental health services need to receive strong support to improve the function and quality of life of a significant proportion of the Portland population.

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Diagnostic criteria for Major Depressive Episode

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.
Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.
   (1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). Note: In children and adolescents, can be irritable mood.
   (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)
   (3) significant weight loss when dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
   (4) insomnia or hypersomnia nearly every day
   (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
   (6) fatigue or loss of energy nearly every day
   (7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
   (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
   (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without specific plan, or a suicide attempt or a specific plan for committing suicide
B. The symptoms do not meet criteria for a Mixed Episode.
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D. The symptoms are due not to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
E. The symptoms are not better accounted for by Bereavement, i.e. after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

Diagnostic criteria for Dysthymic Episode

A. Depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation by others, for at least 2 years. Note: In children and adolescents, mood can be irritable and duration must be at least 1 year.

B. Presence, while depressed, of two (or more) of the following: (1) poor appetite or overeating; (2) insomnia or hypersomnia; (3) low energy or fatigue; (4) low self-esteem; (5) poor concentration or difficulty making decisions; (6) feelings of hopelessness.

C. During the 2-year period (1 year for children and adolescents) of the disturbance, the person has never been without the symptoms in criteria A and B for more than 2 months at a time.

D. No Major Depression Episode has been present during the first 2 years of the disturbance (1 year for children or adolescents), i.e., the disturbance is not better accounted for by chronic Major Depressive Disorder, or Major Depressive Disorder, In partial remission.

Note: There may have been a previous Major Depressive Episode provided there was full remission (no significant signs or symptoms for 2 months) before development of the Dysthymic Disorder. In addition, after the initial 2 years (1 year in children or adolescents) of Dysthymic, there may be superimposed episodes of Major Depressive Disorder, in which case both diagnoses may be given when the criteria are met for a Major Depressive Episode.

E. There has never been a Manic Episode, a Mixed Episode, or a Hypomanic Episode, and criteria have never been met for Cyclothymic Disorder.

F. The disturbance does not occur exclusively during the course of a chronic Psychotic Disorder, such as Schizophrenia or Delusional Disorder.

G. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication).

H. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Diagnostic criteria for Generalized Anxiety Disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The person finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following symptoms (with at least some symptoms present for more days than not for the past six months). Note: Only one item is required in children.
   (1) restlessness or feeling keyed up or one edge
   (2) being easily fatigued
   (3) difficulty concentrating or mind going blank
   (4) irritability
   (5) muscle tension
   (6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)

D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g., the anxiety or worry about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive-

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Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder) gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.

E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.

Diagnostic Criteria for Posttraumatic Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior.

B. The traumatic event is persistently re-experienced in one (or more) of the following ways:
   (1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
   (2) recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content.
   (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening when intoxicated). Note: In young children, trauma-specific reenactment may occur.
   (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
   (5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
   (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
   (2) efforts to avoid activities, places, or people that arouse recollections of the trauma
   (3) inability to recall an important aspect of the trauma
   (4) markedly diminished interest or participation in significant activities
   (5) feeling of detachment or estrangement from others
   (6) restricted range of affect (e.g., unable to have loving feelings)

(7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
(1) difficulty falling or staying asleep
(2) irritability or outbursts of anger
(3) difficulty concentrating
(4) hypervigilance
(5) exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Diagnostic Criteria for Acute Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:
(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
(2) the person's response involved intense fear, helplessness, or horror

B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:
(1) a subjective sense of numbing, detachment, or absence of emotional responsiveness
(2) a reduction in awareness of his or her surroundings (e.g., "being in a daze")
(3) derealization
(4) depersonalization
(5) dissociative amnesia (i.e., inability to recall an important aspect of the trauma)

C. The traumatic event is persistently re-experienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.

D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, people).

E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or impairs the individual's ability to pursue some necessary task, such as obtaining necessary assistance or mobilizing personal resources by telling family members about the traumatic experience.

G. The disturbance lasts for a minimum of 2 days and a maximum of 4 weeks and occurs within 4 weeks of the traumatic event.

H. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition, is not better accounted for by a Brief Psychotic Disorder, and is not merely an exacerbation of a preexisting Axis I or Axis II disorder.

APPENDIX B: ENGLISH AND RUSSIAN VERSIONS

Russian Health and Stress Survey Instrument

I.   English Version
II. Russian Version

RUSSIAN HEALTH & STRESS SURVEY

The following questions are about your health, your feelings, and hurtful events you may have experienced in the past. You may find some questions upsetting. If so, you do not need to answer them. Please place an X in the box representing the best answer. If you are unsure about how to answer a question, please give the best answer you can. The answers to the questions will be kept confidential.

1. In general, would you say your health is:

   ☐ Excellent
   ☐ Very good
   ☐ Good
   ☐ Fair
   ☐ Poor

*The following items are about activities you might do during a typical day. Does **your health now limit you** in these activities?*

2. Moderate activities, such as moving a table, pushing a vacuum cleaner, or walking two blocks:

   ☐ No, not limited at all
   ☐ Yes, limited a little
   ☐ Yes, limited a lot

3. Climbing several flights of stairs:

   ☐ No, not limited at all
   ☐ Yes, limited a little
   ☐ Yes, limited a lot

During the __past 4 weeks__, have you had any of the following problems with your work or other regular daily activities __as a result of your physical health__?

4. Accomplished less than you would like as a
   result of your **physical health:**

   ❑ Yes
   ❑ No

5. Were limited in work or other activities
   as a result of your **physical health:**

   ❑ Yes
   ❑ No

During the __past 4 weeks__, have you had any of the following problems with your work or other regular daily activities __as a result of any emotional problems__ (such as feeling sad or worried)?

6. Accomplished less than you would like as a
   result of any **emotional problems:**

   ❑ Yes
   ❑ No

7. Didn't do work or other activities as carefully as
   usual as a result of any **emotional problems:**

   ❑ Yes
   ❑ No

8. During the **past 4 weeks**, how much did **pain** interfere with your
   normal work (including both work outside the home and housework)?

   ❑ Not at all
   ❑ A little bit
   ❑ Moderately
   ❑ Quite a bit
   ❑ Extremely

These questions are about how you felt during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	A good bit of time	Some of the time	A little of the time	None of the time
9. Have you felt calm and peaceful?	❏	❏	❏	❏	❏	❏
10. Did you have a lot of energy?	❏	❏	❏	❏	❏	❏
11. Have you felt downhearted and blue?	❏	❏	❏	❏	❏	❏

	All of the time	Most the time	Some of the time	A little of the time	None of the time
12. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with activities like visiting friends & relatives?	❏	❏	❏	❏	❏

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The following questions are about frightening or hurtful events. Please indicate whether it _ever_ happened to you, you _ever_ saw it happen, or know someone who the event happened to. You may select more than one answer for each question.

	Happened to you	Saw	Know someone to whom it happened	No
13. Lack of food, water, or shelter	❏	❏	❏	❏
14. Ill health without access to medical care	❏	❏	❏	❏
15. Put in prison because of religious or political belief	❏	❏	❏	❏
16. Afraid that people would find out about religious practice	❏	❏	❏	❏
17. Serious injury or illness	❏	❏	❏	❏
18. Military combat situation	❏	❏	❏	❏
19. Riots or mob violence	❏	❏	❏	❏
20. Sexual abuse or forced to have sex	❏	❏	❏	❏
21. Severe accidents in which people died	❏	❏	❏	❏
22. Forced separation from family members	❏	❏	❏	❏
23. Murder of family or friends	❏	❏	❏	❏
24. Kidnapped	❏	❏	❏	❏
25. Tortured	❏	❏	❏	❏
26. Any other situation that was very frightening or you felt your life was in danger	❏	❏	❏	❏

> *The following are feelings people sometimes have if they have had **frightening or hurtful** experiences. Please read each one carefully and decide if the feelings bothered you **in the past week**.*

	Extremely	A lot	A little bit	None
27. Thoughts or memories of frightening or hurtful event that happened to you	❑	❑	❑	❑
28. Feeling as though a frightening or hurtful event is happening again	❑	❑	❑	❑
29. Repeated nightmares of a frightening or hurtful experience	❑	❑	❑	❑
30. Feeling detached or withdrawn from people	❑	❑	❑	❑
31. Unable to feel emotions	❑	❑	❑	❑
32. Feeling jumpy, easily startled	❑	❑	❑	❑
33. Difficulty concentrating	❑	❑	❑	❑
34. Trouble sleeping	❑	❑	❑	❑
35. Feeling on guard	❑	❑	❑	❑
36. Feeling irritable or having outbursts of anger	❑	❑	❑	❑
37. Avoiding activities that remind you of a frightening or hurtful event	❑	❑	❑	❑
38. Inability to remember parts of a frightening or hurtful event	❑	❑	❑	❑
39. Less interest in daily activities	❑	❑	❑	❑

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	Extremely	A lot	A little bit	None
40. Feeling as if you don't have a future	❏	❏	❏	❏
41. Avoiding thoughts or feelings associated with the frightening or hurtful experience	❏	❏	❏	❏
42. Sudden emotional or physical reaction when reminded of a frightening or hurtful event	❏	❏	❏	❏

The following are feelings that people sometimes have if they have lived in difficult times. Please read each one carefully and decide if the feelings bothered you *in the past week*.

	Extremely	A lot	A little bit	None
43. Suddenly scared for no reason	❑	❑	❑	❑
44. Feeling fearful	❑	❑	❑	❑
45. Faintness, dizziness, or weakness	❑	❑	❑	❑
46. Nervousness or shaking inside	❑	❑	❑	❑
47. Heart pounding or racing	❑	❑	❑	❑
48. Trembling	❑	❑	❑	❑
49. Feeling tense	❑	❑	❑	❑
50. Headaches	❑	❑	❑	❑
51. Spells of terror or panic	❑	❑	❑	❑
52. Feeling restless, can't sit still.	❑	❑	❑	❑
53. Feeling low in energy, slowed down	❑	❑	❑	❑
54. Blaming yourself for things	❑	❑	❑	❑
55. Crying easily	❑	❑	❑	❑
56. Loss of sexual interest or pleasure	❑	❑	❑	❑
57. Poor appetite	❑	❑	❑	❑
58. Difficulty falling asleep or staying asleep	❑	❑	❑	❑

	Extremely	A lot	A little bit	None
59. Feeling hopeless about the future	❑	❑	❑	❑
60. Feeling sad	❑	❑	❑	❑
61. Feeling lonely	❑	❑	❑	❑
62. Thoughts of ending your life	❑	❑	❑	❑
63. Feeling trapped or caught	❑	❑	❑	❑
64. Worrying too much about things	❑	❑	❑	❑
65. Feeling no interest in things	❑	❑	❑	❑
66. Feeling everything is an effort	❑	❑	❑	❑
67. Feelings of worthlessness	❑	❑	❑	❑

68. What is your gender:
    □ Man
    □ Woman

69. In what year were you born? _____

70. How long have you been in the United States?
    □ less than 6 months
    □ between 6 and 11 months
    □ between 1 and 2 years
    □ more than 2 years

71. How many years of schooling have you had?
    □ less than 5 years
    □ between 5 and 8 years
    □ between 9 and 12 years
    □ more than 12 years

72. Are you working outside the home now?
    □ Yes
    □ No

73. How important is having faith in God to your life?
    □ Central
    □ Very important
    □ Slightly important
    □ Not at all important

74. When faced with difficult decisions in life, how likely are you to turn to your church or religious leaders for help?
    □ Frequently
    □ Sometimes
    □ Never

END

Your help is greatly appreciated! **Thank you** for completing this survey!

ОПРОСНИК «СТРЕСС И САМОЧУВСТВИЕ РУССКОГОВОРЯЩИХ ПАЦИЕНТОВ»

Ниже приведены вопросы о состоянии Вашего здоровья, настроении и неприятных событиях, возможно произошедших с Вами в прошлом. Если некоторые вопросы затронут Ваши чувства, Вы можете на них не отвечать. Пожалуйста, отметьте крестиком наиболее подходящий ответ к каждому вопросу. Если Вы не уверены в том, какой выбрать ответ, постарайтесь подобрать наиболее вероятный. Все ответы будут сохранены в полной тайне.

1. В целом, Вы оцениваете состояние Вашего здоровья как:

    ❑ Отличное
    ❑ Очень хорошее
    ❑ Хорошее
    ❑ Среднее
    ❑ Плохое

Последующие вопросы касаются Вашей ежедневной деятельности в течение обычного дня и в какой мере состояние Вашего здоровья ограничивает эту деятельность.

2. Выполнение такой умеренной работы, как пододвинуть стол, пропылисосить или пройти два квартала:

    ❑ Нет, совсем не мешает
    ❑ Да, немного мешает
    ❑ Да, очень мешает

3. Подняться на несколько лестничных пролётов:

    ❑ Нет, совсем не мешает
    ❑ Да, немного мешает
    ❑ Да, очень мешает

В течение __последних 4х недель__ было ли Вам трудно работать или выполнять обычные ежедневные занятия __по причине состояния здоровья?__

4. Выполняли меньше, чем хотелось бы
   по причине **состояния здоровья**:

   ❑ Да
   ❑ Нет

5. Были вынужден ограничить выполняемую
   работу по причине **состояния здоровья**:

   ❑ Да
   ❑ Нет

В течение __последних 4х недель__ возникали ли у Вас проблемы на работе или дома __в связи с эмоциональными проблемами (такими как грусть или излишнее беспокойство)?__

6. Выполняли меньше, чем хотелось бы
   в связи с эмоциональными проблемами:

   ❑ Да
   ❑ Нет

7. Работали не так аккуратно, как обычно
   в связи с эмоциональными проблемами:

   ❑ Да
   ❑ Нет

8. Насколько сильно в течение **последних 4х недель чувство боли** мешало Вам работать (включая работу по дому и за его пределами)?

   ❑ Нисколько
   ❑ Немного
   ❑ Умеренно
   ❑ Сильно
   ❑ Очень сильно

	Всё время	Большую часть времени	Часто	Не очень часто	Редко	Никогда
9. Чувствовали себя спокойно и умиротворённо?	☐	☐	☐	☐	☐	☐
10. Чувствовали себя очень энергично?	☐	☐	☐	☐	☐	☐
11. Чувствовали себя угнетённо и тоскливо?	☐	☐	☐	☐	☐	☐

	Всё время	Большую часть времени	Не очень часто	Редко	Никогда
12. Как часто в течение последних 4х недель Ваше физическое и эмоциональное состояние мешало общению с друзьями и родственниками?	☐	☐	☐	☐	☐

Следущие вопросы касаются событий, которые могли Вас напугать или травмировать. Из перечисленных событий, пожалуйста, отметьте те, которые когда-либо случились с Вами, с кем-нибудь кого Вы знаете или Вы были этому свидетелем. Вы можете ответить более одного раза на каждый вопрос.

	Случилось со мной	Видел	Знаю того, с кем это случилось	Нет
13. Испытывали недостаток еды, воды или крова	☐	☐	☐	☐
14. Болели и не могли обратиться к врачу	☐	☐	☐	☐
15. Были в заключении за религиозные или политические убеждения	☐	☐	☐	☐
16. Боялись, что люди могут узнать о соблюдении Вами религиозных обрядов	☐	☐	☐	☐
17. Серьёзно заболели или получили травму	☐	☐	☐	☐
18. Участие в боевых действиях	☐	☐	☐	☐

	Случилось со мной	Видел	Знаю того, с кем это случилось	Нет
19. Уличные беспорядки или бесчинства толпы	☐	☐	☐	☐
20. Сексуальное домогательство или изнасилование	☐	☐	☐	☐
21. Несчастные случаи со смертельным исходом	☐	☐	☐	☐
22. Насильственное разъединение с членами семьи	☐	☐	☐	☐
23. Убийство членов семьи или друзей	☐	☐	☐	☐
24. Похищение	☐	☐	☐	☐
25. Подвергались истязаниям или пыткам	☐	☐	☐	☐
26. Другие ситуации, вызвавшие сильный испуг или угрожавшие Вашей жизни	☐	☐	☐	☐

	Исключительно Сильно	Сильно	Не очень	совсем нет
27. Мысли или воспоминания о напугавшем или травмировавшем событии, случившемся с Вами	❑	❑	❑	❑
28. Ощущение, как будто Вы заново переживаете напугавшее или травмирующее Вас событие	❑	❑	❑	❑
29. Повторяющиеся кошмарные сновидения о пережитом страхе или травме	❑	❑	❑	❑
30. Чувство отчуждённости или обособленности от людей	❑	❑	❑	❑
31. Неспособность чувствовать эмоции	❑	❑	❑	❑
32. Ощущение нервозности, пугливости	❑	❑	❑	❑
33. Трудности с концентрацией внимания	❑	❑	❑	❑

	Исключительно Сильно	Сильно	Не очень	совсем нет
34. Плохой сон	❑	❑	❑	❑
35. Чувство настороженности	❑	❑	❑	❑
36. Чувство раздражённости или приступы гнева	❑	❑	❑	❑
37. Избегание действий, напоминающих Вам о напугавшем или травмировавшем событии	❑	❑	❑	❑
38. Неспособность вспомнить отдельные моменты напугавшего или травмировавшего Вас события	❑	❑	❑	❑
39. Уменьшение интереса к ежедневной деятельности	❑	❑	❑	❑
40. Ощущение, как будто у Вас нет будущего	❑	❑	❑	❑
41. Избегание мыслей или чувств, связанных с напугавшим или травмировавшем Вас событием	❑	❑	❑	❑
42. Внезапная эмоциональная или физическая реакция при напоминании о напугавшем или травмировавшем Вас событии	❑	❑	❑	❑

Ниже перечислены чувства, возникающие у людей, которые пережили тяжёлые времена. Пожалуйста, прочтите внимательно каждый вопрос и отметьте чувства, беспокоившие Вас в течение последней недели.

	Исключительно Сильно	Сильно	Не очень	Совсем нет
43. Внезапный испуг без явной причины	☐	☐	☐	☐
44. Чувство страха	☐	☐	☐	☐
45. Дурнота, головокружение или слабость	☐	☐	☐	☐
46. Нервозность или внутренняя дрожь	☐	☐	☐	☐
47. Сильное сердцебиение или учащённый пульс	☐	☐	☐	☐
48. Дрожь	☐	☐	☐	☐
49. Чувство напряжённости	☐	☐	☐	☐
50. Головные боли	☐	☐	☐	☐
51. Приступы ужаса или паники	☐	☐	☐	☐
52. Чувство беспокойства, неусидчивости	☐	☐	☐	☐
53. Ощущение потери энергии, замедленность действий	☐	☐	☐	☐
54. Самообвинения в случившемся	☐	☐	☐	☐

	Исключительно Сильно	Сильно	Не очень	совсем нет
55. Плаксивость	❏	❏	❏	❏
56. Потеря интереса к половой деятельности или удовольствиям	❏	❏	❏	❏
57. Плохой аппетит	❏	❏	❏	❏
58 Трудности с засыпанием или частые пробуждения	❏	❏	❏	❏
59 Чувство безнадёжности в отношении будущего	❏	❏	❏	❏
60. Чувство печали	❏	❏	❏	❏
61. Чувство одиночества	❏	❏	❏	❏
62. Мысли о самоубийстве	❏	❏	❏	❏
63. Чувство затравленности, безысходности	❏	❏	❏	❏
64. Излишнее беспокойство по поводу и без повода	❏	❏	❏	❏
65. Потеря интереса к происходящему	❏	❏	❏	❏
66. Ощущение, что любые действия требуют усилий	❏	❏	❏	❏
67. Чувство никчемности	❏	❏	❏	❏

68. Ваш пол:

 ❑ Мужчина
 ❑ Женщина

69. В каком году Вы родились?   _____

70. Сколько времени Вы живёте
    в Соединённых Штатах?

 ❑ Меньше 6 месяцев
 ❑ От 6 мес. до 11 мес
 ❑ От 1 до 2х лет
 ❑ Больше двух лет

71. Сколько лет Вы проучились
    (Ваше образование)?
 ❑ Менее 5 лет (начальная школа)
 ❑ От 5 до 8 лет (неполная средняя школа)
 ❑ От 9 до 12 лет (средняя школа, училище)
 ❑ Более 12 лет (институт, университет, академия)

72. Работаете ли Вы сейчас вне дома?

 ❑ Да
 ❑ Нет

73. Какое место в Вашей жизни
    имеет вера в Бога?

    ❑ Главное
    ❑ Очень важное
    ❑ Не очень важное
    ❑ Никакого

74. Как часто при принятии трудных жизненных
    решений Вы обращаетесь за помощью к
    к религиозным лидерам Вашей веры?

    ❑ Часто
    ❑ Иногда
    ❑ Никогда

КОНЕЦ

Благодарим Вас за Вашу помощь и ответы на эти вопросы!

Table 12: Trauma Events - distribution of responses, all subjects

	Experienced	Saw	Know some who experienced	No exposure	No response
13. Lack of food water shelter	12	6	6	32	3
14. Ill health with no medical care	15	5	9	28	2
15. Imprisoned for personal beliefs	1	2	11	42	3
16. Afraid of religious persecution	7	2	6	42	2
17. Serious injury or illness	25	3	7	23	1
18. Military combat	4	4	8	41	2
19. Riots or mob violence	3	12	4	38	2
20. Sexual assault	2	2	7	45	3
21. Fatal accidents	1	13	8	35	2
22. forced separation from family	7	2	12	36	2
23. murder	4	3	10	39	3
24. kidnapped	0	1	3	52	3
25. tortured	3	0	5	49	2
26. life threatening event	26	7	1	24	1

Table 13: Post traumatic stress disorder symptoms - distribution of responses, all subjects

	Extremely	A lot	A little bit	None	No response
27. memories of traumatic event	6	15	14	22	2
28. re-experiencing traumatic event	1	14	14	28	2
29. repeated nightmares of event	1	9	8	38	3
30. detached / withdrawn	1	10	13	33	2
31. unable to feel emotions	0	2	17	36	4
32. jumpy	5	9	20	25	0
33. difficulty concentrating	1	13	24	19	2
34. trouble sleeping	4	12	26	17	0
35. feeling on guard	1	14	20	21	3
36. irritable	2	9	26	21	1
37. avoidance of activities	0	9	17	31	2
38. amnesia	0	5	17	34	3
39. apathy	1	7	21	56	3
40. hopelessness	2	9	17	28	3
41. avoid thoughts associated with traumatic event	0	10	16	32	1
42. sudden reaction when reminded of event	4	12	14	28	1

Table 14: Anxiety symptoms - distribution of responses, all subjects

	Extremely	A lot	A little bit	None	No response
43. scared for no reason	1	8	13	34	3
44. feeling fearful	0	12	15	29	3
45. faintness, dizziness, weakness	0	13	22	23	1
46. nervousness	0	14	14	29	2
47. heart pounding	1	10	17	28	3
48. trembling	0	6	14	36	3
49. feeling tense	0	16	21	19	3
50. headaches	1	15	33	9	1
51. panic episodes	0	5	11	39	4
52. restless	0	12	19	25	3

Table 15: Depression symptoms - distribution of responses, all subjects

	Extremely	A lot	A little bit	None	No response
53. lethargic	1	15	19	21	3
54. self-blame	1	13	11	30	4
55. crying easily	1	11	19	26	2
56. loss of libido	3	13	14	26	3
57. poor appetite	0	10	14	32	3
58. insomnia	5	20	15	18	1
59. hopeless	2	17	9	28	3
60. sad	1	16	22	18	2
61. lonely	3	10	18	26	2
62. suicidal ideation	1	0	2	54	2
63. feeling trapped	0	2	15	40	2
64. worrying too much	0	14	15	28	2
65. anhedonia	0	7	18	33	1
66. everything an effort	2	11	20	24	2
67. worthlessness	2	7	15	32	3