

**Mental Health Consequences of War, Internal Conflict and  
Disrupting Living Conditions: The Case of Afghanistan**

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## Zusammenfassung

Die Zeit der sowjetischen Besatzung, die Herrschaft der Taliban und der seit 2001 andauernde Krieg haben Afghanistan und seine Einwohner schwer gezeichnet. Die Mehrheit der Afghanen sehen sich einer Reihe andauernder Stressoren ausgesetzt und haben mit schmerz- und leidvollen Erfahrungen zu kämpfen, die eine Vielzahl von körperlichen und psychischen Symptome hervorrufen. Zugleich mangelt es ihnen an einem Grundverständnis psychischer Abläufe. Insbesondere die psychischen Konsequenzen von extrem belastenden Lebensbedingungen und traumatischen Erfahrungen, die sie als in ihrem Körper, ihrem Gedächtnis und ihrer Seele eingeebnet empfinden, sind ihnen nicht bewusst und enden in einem Gefühl der Hilflosigkeit. Die Unterstützung im richtigen Umgang damit blieb lange Zeit aus, da die Versorgungsstruktur des afghanischen Gesundheitssystems insoweit eine beträchtliche Lücke aufwies und so der Nährboden für weitere Konflikte in den Familien und der Gesellschaft anwuchs.

An diesen Befund knüpft das vorliegende Forschungsprojekt an. Das Dissertationsvorhaben hat das Ziel, die psychosozialen Folgen des Lebens in einem Krisen- und Kriegsgebiet am Beispiel Afghanistans systematisch zu erfassen. Hierzu wurden zum einen Afghanen untersucht, die den Lebensumständen in ihrem Heimatland noch ausgesetzt sind. Zum anderen erstreckt sich die Untersuchung auf Afghanen, die aus der Situation in ihrem Land nach Deutschland geflüchtet sind, um dort ein neues Leben zu beginnen. Zudem wurde ein im afghanischen Gesundheitssystem mittlerweile eingesetzter psychosozialer „Counselling“- Ansatz auf seine Wirksamkeit hin untersucht.

Die Studien in Afghanistan verdeutlichten die hohe Prävalenz psychischer Belastungen in der Bevölkerung; vor allem zeigten sich schwere Depressions- und Angstsymptomaten. Die befragten afghanischen Frauen berichteten von einer Vielzahl psychosozialer Stressoren. Hierzu zählten unter anderem Armut, häusliche Gewalt und Familienkonflikte. Die tägliche, reale Angst sowie die Unsicherheit und Unkontrollierbarkeit der gegenwärtigen Situation führten in einer Vielzahl von Fällen zu einer traumatischen Stressreaktion, die im Zuge des Dissertationsvorhabens von dem klassischen Konzept der Posttraumatischen Belastungsstörung abgegrenzt wurde. Dabei entstand die Idee der „Continuous Traumatic Stress“ Situation, die die Zeit-Variable zu berücksichtigen versucht.

Der in einer Klinik in Nordafghanistan systematisch untersuchte psychosoziale „Counselling“- Ansatz erwies sich als äußerst effektiv und führte zu einem signifikanten Rückgang der Symptomatik und der psychosozialen Stressoren in den behandelten Frauen.

Eine weitere Studie zur Erfassung des psychischen Gesundheitszustands solcher Afghanen, die zwar den Krieg in ihrem Heimatland miterlebt haben, sich inzwischen jedoch als Asylbewerber oder Flüchtlinge in Deutschland aufhalten, ergab niedrigere Werte in der Depressions- und Angst-Symptomatik als die in Afghanistan durchgeführten Studien. Die psychosozialen Stressoren unterschieden sich nicht nur inhaltlich von den Angaben der in Afghanistan lebenden Befragten, sondern sie traten auch insgesamt weniger stark auf. Bemerkenswerterweise lag die von afghanischen Frauen in Deutschland berichtete häusliche Gewalt in Frequenz und Stärke signifikant niedriger als die von in Afghanistan lebenden Frauen angegebene. Schließlich zeigte sich, dass die in Deutschland lebenden afghanischen Frauen und Männer den Immigrationsprozess als außerordentlich belastend empfinden.

Vor diesem Hintergrund ist eine weitere Unterstützung des Aufbaus des afghanischen Gesundheitssystems sinnvoll. Denn die durchgeführten Studien verdeutlichen, dass der Zugang zu einer qualifizierten und umfassenden seelischen Gesundheitsversorgung eine Voraussetzung für ein Zurückfinden in die psychische Funktionstüchtigkeit, für ein Zurechtfinden mit der schmerzhaft erlebten Vergangenheit und schließlich für ein Einfinden in ein Zusammengehörigkeitsgefühl innerhalb der Familie und Gesellschaft ist.

## **Abstract**

The Soviet occupation, the reign of terror under the Taliban and the armed conflict since 2001 have deeply scarred the Afghan nation and its people. The majority of Afghans face a set of permanent stressors and have to deal with painful and burdensome experiences and losses which often elicit somatic and psychosocial symptoms. At the same time, Afghan men and women almost invariably lack awareness and conceptual knowledge of psychological processes. In particular, the mental health consequences of stressful living conditions and traumatic memories, which they experience as being etched into their body, mind and soul, are unconscious to them. This condition evokes a feeling of helplessness in the people. Until recently, the Afghan public health system did not provide any mental health services. The population also did not receive any support in coping with the resource poor living conditions. In consequence, the breeding ground for further conflicts within families and the society grew.

This situation served as the starting point of the present doctoral thesis. The research project aimed to systematically investigate the psychosocial consequences of living in an area of war and crisis by using the example of Afghanistan. For this purpose, it covers Afghans who still live in the burdensome living conditions of their home country and Afghans who decided to escape the situation and managed to flee to Germany in order to start a new life there. Furthermore, the doctoral thesis investigates in a randomised trial the efficacy of a psychosocial counselling approach which has recently been integrated into the Afghan public health system.

The studies conducted in Afghanistan point out the high prevalence of mental health problems within the population. In particular, high rates of symptoms of depression and anxiety were found. The interviewed Afghan women reported a number of psychosocial stressors, such as poverty, domestic violence and family conflicts. The daily real fear as well as the insecurity and uncontrollability of the present situation often led to a traumatic stress reaction, which was delineated from the classic notion of PTSD. This sparked the idea of developing the concept of a “continuous traumatic stress” situation, which takes into consideration the time variable.

The randomised trial investigating the efficacy of psychosocial counselling conducted in a health facility in Northern Afghanistan showed a significant reduction of mental health symptoms and psychosocial stressors in counselled Afghan women.

A further study assessing the mental health status of asylum-seekers and refugees in Germany who had experienced the war in Afghanistan showed lower rates of symptoms of depression and anxiety. The participants in Germany reported less and different psychosocial stressors than people assessed in Afghanistan. Remarkably, Afghan women living in Germany reported significantly lower rates of domestic violence than those being interviewed in Afghanistan. At the same time, the study showed that Afghan men and women who live in Germany perceive the immigration process as exceedingly stressful.

In sum, the present doctoral thesis demonstrates that the support of the Afghan health system plays a vital role in building up a civil society. The studies showed that the access to a qualified and profound mental health service is a precondition for regaining psychological functioning, coping with painful experiences and finally establishing healthy relationships within the family and the community.

## **1. General introduction**

### **1.1. Psychosocial situation in Afghanistan**

More than 10 years after the fall of the Taliban regime in Afghanistan, the majority of the population still faces severe hardship. Incidents of armed conflict and terrorism, poor living resources and changes in cultural and social identities have an adverse impact on the overall development. The present research project systematically assessed the psychosocial consequences of the current living situation in Afghanistan and the participants' mental health status in sample of Afghans residing in their home country (Study A/B). In a further study, we collected corresponding data with regard to Afghan refugees and asylum seekers who managed to flee from their home country to start a new life in Germany (Study C). Over the course of the research project it became obvious that many families were rendered at least partially dysfunctional due to continued stress, exposure to traumatising events, loss of beloved, homes and jobs and poverty-related suffering.

These factors have profound effects on the mental health status of the Afghan population. As shown in Study A and B, the levels of mental health-related problems are extraordinarily high in Afghanistan. The interviewed women particularly suffered from symptoms of depression, anxiety and posttraumatic stress. Moreover, they experienced daily stressors, such as poverty, insecurity, family conflicts and domestic violence are overwhelming and almost insurmountable. The combination of already existing mental health problems, daily stressors and demanding living conditions creates an exceptionally burdensome state for the Afghan people. This state entails traumatising characteristics, yet it promotes the development of so far unknown mental health consequences as it has become a permanent situation of real threat. Study B aimed at exploring this state in Afghan women and deals with the emerging concept of "continuous traumatic stress". Since the concept is yet to be clearly defined and the discussion on the suitable set of instruments is still ongoing, the present study should be considered as a contribution to the discussion process. We believe that the development of this new concept is very promising, particularly because the existing research on "traumatic stress disorders" primarily focuses on individuals suffering from the consequences of traumatic events in the past. Thus, it does not adequately take into account the effects of ongoing stress and unsafe living conditions experienced by people living in war zones. During the data collection in Afghanistan for Study A and B, we were confronted with a number of women who found themselves in a situation of

“continuous traumatic stress”. For instance, one woman showed typical post traumatic stress disorder (PTSD) symptoms such as avoiding and increased arousal in response to witnessing a suicide attack. At the same time, the woman is still exposed to a significant risk of falling a victim of a further suicide attack. Since the woman obviously also perceives a real threat, which might produce an avoiding behaviour and a certain alertness, we cannot be sure that she is suffering from a classical PTSD. The emerging concept of “continuous traumatic stress” takes the current living situation into account and is in our view therefore suitable to investigate post traumatic stress reactions in populations living in insecure and violent environments.

In the case of Afghanistan, the highly prevalent mental health problems are experienced as highly disabling and have serious social consequences such as stigmatisation, exclusion, distortion of the family system and an increase in domestic violence. The quick readiness to become violent and beat other family members is a commonly observed phenomenon in the current Afghan society. Some of our study participants reported that even the harmless fighting of children irritates them and makes them lose their temper. Such incidents serve as the starting point of domestic violence which often causes great regret within the violent family member. This behaviour pattern can be observed not only in men but also in women and even in children. We believe such overreactions are prompted by ongoing high stress level.

Personal observations and conversations with the Afghan population revealed a further difficulty which was not part of the present investigations, but could be an important cause for the high prevalence of mental health problems. Many people reported that the transition from a traditional to a modern Afghan society shatters their social and cultural identity. Eventually, this can lead to the feeling of not being able to take responsibility for one's own life. Afghan men often fail to "keep control" of the environment which they are supposed to lead and “keep control” of their inner state at the same time. This often leads those men to reverting to restrictive traditional practises. Not unfrequently, these practises include domestic violence, forced marriages and constrictive control of women's health needs.

To sum up, the behaviour of people suffering from mental health symptoms has the potential to change the entire interaction within the family and other social circles, leading to problems such as social isolation, drug abuse, conflicts in communities and domestic

violence. These problems often have a strong negative impact on children's' and adolescents' developmental perspectives. They induce the feeling of not being able to influence one's own life and amplify the perception of cultural identity loss. Thus, while there had been a strong need for mental health services, they were practically non-existent in Afghanistan, especially in the rural provinces. Health staff lacks both awareness, knowledge and treatment options regarding mental health issues. As shown in Study A, the lack of information about mental health problems contributes to the insufficient treatment of mental health patients by the local physicians. The physicians were not trained to develop proper treatment plans for patients suffering from mental health symptoms and problems. Psychosomatic symptoms and symptoms of depression and anxiety were frequently dealt with by prescribing any available medication, such as sleeping pills and pain killers, which neither improved the patients' situation nor helped to reach the roots of the problem (Study A). Even where psychopharmacological treatment was deployed and perhaps eased the symptom for a certain time, the underlying psychosocial stressors remained unexplored. At the same time, the risk of drug addiction rises and family conflicts due to factors such as traumatic experiences, generational or cultural clashes and gender inequality remain unsolved.

## **1.2. The psychosocial counselling approach**

Between 2008 and 2010, the Afghan Ministry of Public Health elaborated a model for the provision of mental health services with the support of one of our team members (IM). This model approach includes psychosocial counselling in order to meet the needs of the Afghan mental health situation. During this time, training manuals for health staff (physicians, nurses) in primary health care as well as a methodology for the training of psychosocial counsellors were developed with the input of two of our team members (IM/SA). Subsequently, Study A assessed the efficacy of the psychosocial counselling approach (by IM) which had been implemented by the Afghan Ministry of Public Health to train psychosocial counsellors working in the national health care system.

Until then, psychosocial counselling as a treatment approach for Afghan people who suffered from a high level of ongoing stress in everyday life and frequent mental health problems was inexistent. For this reason, it had to be developed carefully in a practical step

by step approach, taking into consideration the cultural and social preconditions for a satisfactory life in the Afghan society (see Study A).

Since there was no trained staff with prior knowledge of the subject matter, the approach had to be very coherent and clearly structured. Considering the high costs, the training had to be limited time-wise yet comprehensive enough to convey the entire manual. The counselling approach is resource and problem-solving oriented. Its understanding of psychodynamic processes is based on depth psychology. The approach's structure and intervention concepts were inspired by Watzlawick's (1974) and Antonovsky's (1987) ideas. The approach aims at restoring self-efficacy through using the available resources and re-gaining influence on and responsibility for one's own life. It is intended firstly to support the client in understanding his or her present life situation. Secondly, the psychosocial counsellor helps to enable the client to manage the situation and finally regain a sense of meaning in life by putting the burdening situation into the greater context of the client's life.

The first session is the most important, as the psychosocial counsellor has to identify the current most pressing problem or main complaint which disturbs the client's functioning in everyday life. Usually, these main complaints are related to an underlying psychosocial stressor, such as an ongoing family conflict, an inner dispute between different values or a traumatic experience. The identification of the most pressing problem and the process of mutually finding solutions, enables the client to regain the feeling of being able to influence the situation and to become self-efficient. The counselling process is based on the following structure:

**Understanding the situation.** The first step of the process is a careful assessment of the symptoms the client suffers from. The challenge is to understand the meaning of the symptom. In cooperation with the client, the counsellor seeks to the root causes of the symptom. Why is it necessary for this client to develop this symptom? Is there any other way to express what is being expressed through the symptom? Next, the underlying psychosocial stressors are explored and brought into connection with the current symptoms the clients suffer from. The psychosocial counsellor categorises the explored problems according to a psychosocial stressor list consisting of six main stressors, namely family conflict, personal difficulties, difficult life transitions, poverty, loss of a loved one and loss of possessions. After having explored the symptoms and their connections to the psychosocial stressors, the client will receive psycho-education in order to understand the

situation, the meaning of the symptoms and possible development and treatment options. By means of understanding and accepting the situation, unnecessary fears and assumptions of the client are avoided or reduced. Additionally, the impact of the psychosocial stressors on the daily life and the family system will be discussed. Subsequently, the client and the psychosocial counsellor explore and agree on the “main complaint” and, after having worked on it, they agree on a solution. While this process is guided by the counsellor, the client is intended to regain a sense of responsibility and manageability.

**Learning from the situation.** The psychosocial counsellor helps the client to gain new insights into his situation and develop empathy for himself/herself as well as for others. Frequently, the resolution of a relatively minor problem inspires the clients’ confidence in their ability to change their situation. In consequence, the clients’ begin to develop solutions for other problems rather than staying passive and without hope. For example, after an Afghan woman has come to fully understand in what ways her mental health problems and family problems are caused by her early and forced marriage, she might begin to doubt marrying her own young daughter by force.

**Managing the situation.** Next, the client and the psychosocial counsellor explore and agree on the “main complaint” and on a possible solution. This process should again be carefully guided by the counsellor. In this stage of the process, the client is intended to regain a sense of responsibility and manageability towards his most pressing problem. The counsellor needs to be careful not to impose a possible solution or seduce the client to agree on a solution since the client is the expert of his/her life and will know best what is possible. At the same time, the solution must be realistic and the client must have the feeling that the solution is meaningful. As soon as the counsellor and the client have agreed on a solution, an observable change in the client’ behaviour and reasoning has to happen. In the next step, the counsellor and the client explore what may contribute to the solution. This means exploring realistic possibilities for the client to either influence the situation or gain a different attitude towards a situation which cannot be changed. It also includes an emphasis on self-care. The counsellor may choose to give the client a task to fulfil until the next counselling session. This can be a practical task such as a behavioural changer, an observational task such as focusing on positive moments or simply observing one’s own behaviour and feelings elicited by a certain situation, or an emotional task such as trying to

understand how another person might feel in a specific situation. By this means, the client quickly experiences that he/she can have some influence on his/her life.

Additionally, the approach integrates different intervention modules (the whole manual can be download from the official website of the Afghan Ministry of Public Health, <http://moph.gov.af/en>). Among the intervention modules is, for example, the Narrative Exposure Therapy (NET, Schauer et al., 2005), which has been developed for the treatment of trauma victims. The NET is a psychotherapeutic intervention based on scientific findings in brain science, affective neuroscience, the psychology of memory, neuropsychology and human rights testifying (Elbert & Rockstroh, 2004; Elbert & Schauer, 2002). This sophisticated therapeutic approach has been researched extensively. It combines, inter alia, core elements of behavioural exposure therapy, client-centred psychotherapy and testimony-therapy. The client is asked to confront emotionally charged and traumatic moments of her/his life (“exposure”) and systematically work through them by verbalising the experience (“narration”). As this intervention module has been widely investigated settings comparable to Afghanistan, it constitutes a valuable input for the respective counselling approach (Catani, Kohiladevy et al., 2009; Jacob et al., submitted; Neuner et al., 2008; Schaal & Elbert, 2006; Schaal et al., 2009).

Finally, a third Study (Study C), intended to assess the mental health status of those Afghans who decided and managed to flee from their home country in order to escape the resource-poor and dangerous living conditions and, in many cases, traumatic experiences. Even though the third sample was to different from that of the other two studies for a profound and systematic comparison, it gives indications as to the experienced changes and remaining difficulties that influence the psychosocial conditions of Afghans residing in a stable and secure country such as Germany.

### **1.3. Aims of the doctoral thesis**

By taking the example of Afghanistan, the present doctoral thesis intended to draw a realistic picture of the mental health consequences of experiencing war, conflict and continuous insecurity. Moreover, we intended to support the current efforts of Afghan and international stakeholders to integrate an effective therapeutic approach within the country’s

public health system in order to meet the urgent need of the Afghan population for mental health support. Finally, the mental health status of Afghan asylums-seekers and refugees living in Germany was assessed and compared as far as possible with the mental health condition of Afghans residing in their home country. An additional intention was to explore what effects the restrictive living situation and legal status in Germany might have on the psychosocial well-being of asylum seekers.

The research project focused on the country and the people of Afghanistan since the doctoral student has an expertise in the local language and culture which facilitated thorough observations and deeper insights into the specific mental health consequences of war, violence and insecure living conditions.

## **2. Study A: Provision of mental health services in resource-poor settings: A randomised trial comparing counselling with routine medical treatment in North Afghanistan (Mazar-e-Sharif)**

Sarah Ayoughi, Inge Missmahl, Roland Weierstall, Thomas Elbert

### **2.1 Abstract**

**Background:** Psychosocial stress caused by war, ongoing conflict, lack of security, and restricted access to resources promotes mental suffering and diseases in many resource-poor countries. In an exemplary setting, the present study compares the efficacy of psychosocial counselling with routine pharmacological treatment in a randomised trial in Mazar-e-Sharif (Afghanistan).

**Methods:** Help seeking Afghan women (N = 61), who were diagnosed with mental health symptoms by local physicians either received routine medical treatment (treatment as usual) or psychosocial counselling (5–8 sessions) following a specifically developed manualised treatment protocol. Primary outcome measures were symptoms of depression and anxiety assessed before treatment and at follow-up using the Hopkins Symptom Checklist and the Mini-International Neuropsychiatric Interview. Secondary outcome measures were psychosocial stressors and coping mechanisms.

**Results:** At 3-month follow-up, psychosocial counselling patients showed high improvements with respect to the severity of symptoms of depression and anxiety. In addition, they reported a reduction of psychosocial stressors and showed an enhancement of coping strategies. At the same time, the severity of symptoms, the quantity of psychosocial stressors and coping mechanisms did not improve in patients receiving routine medical treatment.

**Conclusion:** These results indicate that psychosocial counselling can be an effective treatment for mental illnesses even for those living in ongoing unsafe environments.

**Trial registration:** NCT01155687

## 2.2. Background

The ongoing and escalating conflict in Afghanistan results in continuous social and sometimes traumatic stress which has an increasingly harmful impact on the mental health of the population. More than thirty years of war have left the lives of two generations of Afghans disrupted. Afghanistan is among the least developed countries in the world, ranking 181 (out of 182) nations in the Human Development Index 2009 of the United Nations.

Studies investigating the mental health status of the Afghan population report extraordinarily high levels of mental health related problems (Lopes Cardozo et al., 2004, 2005; Rasekh et al., 1998; Scholte et. al., 2004). Lopes Cardozo and colleagues conducted a national mental health survey in 2002 and reported that 73% of the Afghans suffer from symptoms of depression, 84% from symptoms of anxiety and 59% were diagnosed with PTSD (Lopes Cardozo et al. 2005). Continuous stressors, such as the loss of beloved ones, homes and jobs, poverty-related suffering, child labour, traumatizing events and drug abuse affect the functioning of families and whole communities (Lopez Cardozo et al., 2004; Miller et al., 2008; Molica et al., 1987; Schnurr, 2003). They are likely to exert their toll on the mental health of the Afghan population at large (Lopez Cardozo et al., 2004; Miller et al., 2008).

Therefore, the recovery of mental health and the improvement of quality of life standards constitute preconditions for building civil society and promoting peace and stability within Afghanistan (Rubenstein, 2009).

However, until a few years ago, mental health facilities were practically nonexistent in Afghanistan (Cardozo et al., 2004; Ventevogel et al., 2004). A report by the World Health Organization that focused on the Afghan mental health system stated that in 2005 there were only eight psychiatrists, 18 psychiatric nurses, and 20 mental health professionals for a population of 27 million (WHO, 2006).

At the same time, many studies indicated that even under resource-poor and ongoing unsafe conditions with limited financial and professional resources, such as in Afghanistan, an effective treatment of mental health problems can be provided, especially through a psychotherapeutic approach (Bolton et al., 2007; Jacob et al., submitted for publication;

Neuner et al., 2004, 2008; Rahman et al., 2008; Schaal et al., 2009). Accordingly, Neuner and colleagues (2008) showed that effective psychotherapy can be provided by persons having received no more than a short-term training of 6 weeks. The study showed that mental health of Ugandan refugees living under unstable and unsafe conditions were greatly improved. Schaal and colleagues (2009), investigating counselling treatment in a war-affected sample of Rwandan genocide orphans, showed that even a small number of counselling sessions can significantly improve the mental health status of participants. These studies, showing the effectiveness of short-time interventions and the ability of counsellors with limited training to successfully conduct therapy are consistent with the findings of Rahman and colleagues (2008), who trained community health workers in treating mothers with depression in rural Pakistan within four sessions. The mentioned studies indicate that counselling is feasible even with limited resources and that it is effective for populations living in conflict settings. The need of the Afghan population for mental health services was recognised by the Ministry of Public Health of Afghanistan. In a revised version of the Basic Package of Health Services (BPHS), the Mental Health Component was changed from a purely medical treatment approach (edition 2005) to a bio-psychosocial treatment approach (2010) within the BPHS (Ministry of Public Health Afghanistan, 2010). As a result, psychosocial counselling services were integrated as a treatment method into the Primary Health Care System of the country. Supporting this effort and approach of the Ministry of Public Health, the Caritas Germany/EU Project provided counselling services in selected health centres affiliated with health facilities of the BPHS (Ministry of Public Health Afghanistan, 2010) in three provinces of Afghanistan, one being located in Mazar-e-Sharif.

To our knowledge, there have been no studies to date, which have systematically investigated the effectiveness of a psychotherapeutic intervention in Afghanistan. The present investigation was designed to fill this gap. We aimed at examining the mental health status of help seeking Afghans suffering from mental health problems. For this purpose, we assessed the severity of symptoms of depression and anxiety and the extent of psychosocial stressors. The study hypothesized that individuals who were diagnosed by local physicians with symptoms of depression and anxiety would benefit from psychosocial counselling in terms of an improvement in the primary outcome (symptom reduction). Additionally, we expected an enhancement of coping strategies and a reduction of psychosocial stressors in the counselling group. Eventually, we assumed that the change in the severity of mental

health symptoms, associated with depression and anxiety, would be related (positively correlated with) to the change in the amount of social stressors reported by the patients (Neuner et al., 2004).

## 2.3. Methods

### *Setting and local team*

The present investigation was conducted in the Balkh province of Afghanistan, in its capital Mazar-e-Sharif, for the purpose of a scientific evaluation of the implementation of psychosocial counselling into the Afghan health system. The implementation process had been initialized in three provinces of the country. As the trial site, we chose Mazar-e-Sharif, 320 km northwest of Kabul, as it provided relative security and stability at the time of the study. The counselling centre was located in a suburban district.

Diagnostic interviews were conducted by two experienced local counsellors (male and female) and two international experts (both female), one fluent in the local language (Dari). A third local experienced counsellor served as a translator to one of the international experts. The international experts had received training in clinical diagnosis using structured interviews. The two experienced local counsellors had also assisted in a previous epidemiological survey in Kabul, conducted by our group (Catani et al., 2009).

Subsequent therapies were carried out at the counselling centre by newly trained local counsellors.

### *Participants*

In September and October 2009, a sample of 66 mental health patients (63 female, 3 male) seeking help at a Primary Health Care Centre in Mazar-e-Sharif were recruited by our team. Since the aim of our study was to assess the common treatment for mental health patients in Afghanistan, the participants were enrolled into the study solely upon the autonomous examination and subsequent referral by independent local physicians. According to their medical records none of them met our exclusion criteria (neurological disorder, mental retardation, dementia, or schizophrenia). To allow randomisation, our team allocated the participants to one of the treatment conditions based on a daily alternation routine, meaning that alternately, one day patients were allocated to the medication group, and the next day to the counselling group.

A written informed consent, explaining the procedure and the nature of the particular treatment was read out to each patient. As the illiteracy of the sample was high (73,9%),

patients willing to participate gave written or oral consent. The study was approved by the Ethical Review Board of the University of Konstanz.

### *Measures*

All instruments were translated by local experienced counsellors into Dari using blind back translation. Discrepancies were checked by experts and a final version was derived through extensive consultation with local counsellors from the Balkh province. Due to the high illiteracy rate, all instruments were used in the form of structured interviews in which questions were read aloud to the patients.

***Sociodemographic characteristics.*** Questions related to sociodemography assessed information on sex, age, ethnicity, religion, marital status, educational level, living arrangements and conditions. Additionally, we inquired into the use of medication in order to control unsupervised self-medication in both treatment groups.

### *Primary outcome measures*

***HSCL-25.*** The Hopkins Symptom Checklist 25 was used to screen for symptoms of depression and anxiety (Derogatis et al., 1974). This screening tool is composed of a 15-item subscale for depression and a 10-item subscale for anxiety, with answer choices ranging from 1 (not at all) to 4 (extremely). It has been used widely in studies of refugees and other war-affected populations (Lavik et al., 1999; Mollica et al., 1987), including four studies in Afghanistan (Lopez Cardozo et al. 2004, 2005; Miller et al. 2008; Scholte et al. 2004), providing outcomes at symptom, but not at diagnosis level. This screening instrument has proven to be a reliable and valid instrument for measuring symptoms of depression and anxiety in various countries and cultures (Mollica et al., 1987). Moreover, the HSCL depression scale has been found to have high reliability and validity in multiple studies with medical patients, and being sensitive to change in depressed primary care patients (Derogatis et al., 1974).

***M.I.N.I.*** To assess whether the patients suffered from a current Major Depression, the depression section from the “Mini-International Neuropsychiatric Interview” (Sheehan et al., 1998) was included. The M.I.N.I. is a short structured diagnostic interview for DSM-IV and ICD-10 psychiatric disorders. Patients were asked to indicate which of the depression symptoms they had experienced within the two weeks preceding the interview.

Validation studies have shown good validity and reliability in making diagnoses in less time than conventional structured interviews (Sheehan et al., 1998).

**Screening for Depression.** A culturally grounded assessment measure was developed in close collaboration with the “Mental Health Working Group Afghanistan”, consisting of international and Afghan mental health professionals and practitioners (SAMHSA), which supports the Ministry of Public Health of Afghanistan in establishing and implementing mental health services in the country. This screening instrument explored current depressive symptoms on a 4-point-Likert-scale between 0 (never) and 3 (always). The cumulated sum of responses to the 8 items gives an image of the severity of depressive symptoms on a continuum between 0 and 24. This interview screened for culture-specific indicators of depressive symptoms and was developed to provide a first screening tool for the Primary Health Care sector in the particular Afghan context. Items concern the somatic domain (*How often do you have pain anywhere in your body that comes and goes, such as headache, stomach pain, heart racing or high blood pressure?*), for feeling change (*How often do you experience the feeling of not caring about your family/children anymore?*), social isolation (*How often do you feel lonely?*), behavioural changes (*Has there been any change in your participation in everyday life?*), harm to self or others (*How often are you so desperate or out of control, that against your will, you want to hit yourself or others?*), suicidality (*Have you ever tried to end your life? If yes: Do you now want to end your life?*) and ability to act on one’s behalf (*Have you tried out things to feel better or solve these problems?*). Two additional questions checked for a psychosocial origin of the symptoms and drug abuse.

#### *Secondary outcome measures*

**Psychosocial stressors & coping mechanisms.** Interviews were conducted, according to the manual “Professional Package for Psychosocial Counsellors working in the BPHS in Afghanistan” (Mental Health Department of the MoPH - Kabul-group-08, 2009), identifying psychosocial stressors and coping mechanisms among the patients. For the assessment of psychosocial stressors, a checklist of 11 different types of stressors was provided. The following psychosocial stressors, describing common problems in the Afghan society, were checked: *Family conflicts – interpersonal conflicts – difficult life transition – grief and loss – personal difficulties – sexual problems – traumatic experience – domestic violence – migration – poverty – changing gender roles and values.* Subsequently, the

interviewer documented the stressors scoring each psychosocial stressor as being currently present or not present in the patient's daily life.

In order to estimate the quantity and intensity of coping strategies to stressful circumstances, an additional checklist was used. Coping mechanisms that had been reported by the patients were scored for each of the 5 items on a 4-point-Likert-skale between 0 (not at all) and 3 (fully). By this means, we explored the patients understanding (*referring to the relationship of symptoms and stressors (1)*) and manageability (*referring to the ability of creating, improving, maintaining relationships (2); solving conflicts (3) and recognizing and using own resources (4)*) of the situation as well as the value of life to them (5).

Both indicators were determined during the interview by a local psychosocial counsellor of our team.

## ***Intervention***

### *Psychosocial counselling*

Experienced local physicians, who had been trained as psychosocial counsellors in an extensive, 2-year training programme for psychosocial counselling in 2005/2006 (developed and led by IM, supported with a training on trauma treatment by TE) and gathered considerable experience in counselling there after, were educated to train Afghan women and men as psychosocial counsellors on basis of the manual "Professional Package for Psychosocial Counsellors working in the BPHS in Afghanistan" (MoPH; 2009) approved by the Afghan Ministry of Public Health.

The 3.5-month intensive training of the 30 selected participants took place in Kabul between April and August 2009 and ended with a final examination, ensuring the required quality standard of the counsellors being set by the Ministry of Public Health. Subsequently, the newly trained psychosocial counsellors took up employment at local health care centres in three provinces in North Afghanistan, 3 of them were deployed in a counselling centre in Mazar-e-Sharif.

The counselling treatment followed the treatment guidelines of the manual "Professional Package for Psychosocial Counsellors working in the BPHS in Afghanistan" (Mental Health Department of the MoPH - Kabul-group-08, 2009), which has become the

official standard treatment protocol of psychosocial counsellors working in the Afghan basic healthcare system in 2009. The counselling approach has been developed and adapted to the socio-cultural background of Afghanistan by one of the authors (IM) on basis of her longstanding in-field experience. Between 2005 and 2008, approximately 11,000 patients were treated by IM and her Afghan team, consisting of experienced physicians and counsellors, in Kabul. The experiences and insights of the work with the patients were integrated into the present approach and adjusted to the specific cultural conditions. Watzlawick's short term therapy (1974) and Antonovsky's salutogenetic approach (1987) lie at the core of this psychosocial intervention. Additionally, selected intervention modules of Cognitive Behaviour Therapy have been included. This manual represents a resource- and problem-solving orientated counselling approach which aims at restoring self-efficacy and developing resources, hereby enabling the Afghan patients to re-participate in their daily life in a responsible and satisfying way. Additionally, the approach is geared towards improving the patient's general physical, mental, social and spiritual health. Emphasis was put on a sense of coherence, covering comprehensibility, manageability, and meaningfulness.

The first five clearly structured counselling sessions aimed at gaining a deep understanding of the relationship between the patient's symptoms and their connection to psychosocial stressors. Following Watzlawick's ideas (1974), special focus lay on the most pressing problem (main complaint) of the patient and on the identification of connections between the main complaint, current symptoms and underlying social stressors. Then, the counsellor and the patient explore possible coping mechanisms on the basis of the patient's values and resources, in order to improve the pressing psychosocial situation (self-efficacy). In case of a clinical necessity to provide the patient with further counselling, up to 8 additional counselling sessions could be added, following selected intervention modules of Cognitive Behaviour Therapy (further information is available from the authors upon request and the complete manual can be download from the official website of the Afghan Ministry of Public Health under <http://moph.gov.af/en>).

### *Routine medical treatment*

The usual medical treatment was carried out by four local physicians, who regularly examined the patients of the control group and prescribed medication. We agreed with them on a weekly appointment and a precise documentation on the prescribed medication. This

intervention can be described as the usual treatment within the Basic Public Health Care System for patients reporting mental suffering and psychosocial problems. We noted a considerable variation in prescribed medications (see Table 1).

### ***Procedure***

The study was carried out between September 2009 and March 2010. After being randomly assigned to one of the treatment conditions, i.e. counselling or medical treatment, each patient received two initial interviews. The first one was conducted by the local experienced counsellors of our team (patients were interviewed by a counsellor of the same sex) and explored psychosocial stressors and coping mechanism. The second one was carried out by the experts from the University of Konstanz and checked for symptoms of depression and anxiety (HSCL-25; M.I.N.I.; Screening for Depression).

The routine medical treatment by the local physicians started immediately after the initial expert interview. Patients receiving medical care were treated at the local health care centre for the following 3 months. With regard to the counselling treatment group, the subsequent five manual based counselling sessions were scheduled for the following 5 weeks and carried out by the three newly trained counsellors in the counselling centre in Mazar-e-Sharif. Taking into account the specific cultural and religious setting, female participants were only counselled by female counsellors and male participants by our male counsellor. The duration of a counselling session was 45 minutes but could extend up to 60 minutes. If the newly trained counsellor had determined a respective clinical necessity, up to 8 additional counselling sessions could be added in agreement with the supervising team from Kabul. In the present trial, four patients received more than 5 sessions of counselling ( $M = 5.16$ ,  $SD = .45$ , ranging between 5 and 7 sessions). Three months after the first interviews, our team of experienced local counsellors from Kabul and experts from the University of Konstanz carried out a follow-up examination consisting of the previously used battery.

The interviewers who carried out the follow-up test were not fully blind to the treatment condition as the two types of intervention (psycho- vs. pharmacotherapy) were very different and thus sometimes revealed through unsolicited information given by the patient. Moreover, although the knowledge about the treatment condition was not updated

before follow-up, we cannot rule out that the expert-interviewer still remembered the treatment condition of some patients.

Initial interviews took place either at the counselling centre or at the local health care centre being located next door. The follow-up interviews were carried out at the same place.

### *Analysis*

Descriptive data are expressed as frequencies (%), mean scores, and standard deviations. Baseline characteristics of the groups were compared using chi-squared tests and Fisher's exact tests to examine the effects of randomization. Between-group differences at pre-test and follow-up were analysed using independent-sample t tests, Mann–Whitney U tests and analysis of covariance.

For the outcome variables we calculated repeated-measures analyses of variance (ANOVA) with time of assessment (pre-test and 3-month follow-up) as the within-subject factor and treatment condition (counselling and medication) as the between-subject factor. For significant results, changes within the particular treatment group from pre-test to follow-up were analysed using binominal tests and sample t tests. Within-treatment effect sizes (Cohen's d) were computed for both treatment conditions. To control for mediation effects we carried out linear forced entry regression analyses. The assumption of homogeneity of variance was tested using the Levene test at a significance level of  $p > .05$ . Kolmogorov-Smirnov tests were used to determine normal distribution. Data analysis was performed using PAWS Statistics 18.0 (SPSS Inc., 2010) and R for Mac OSX Version 2.11.1 (R Development Core Team 2010).

## 2.4. Results

### Baseline characteristics

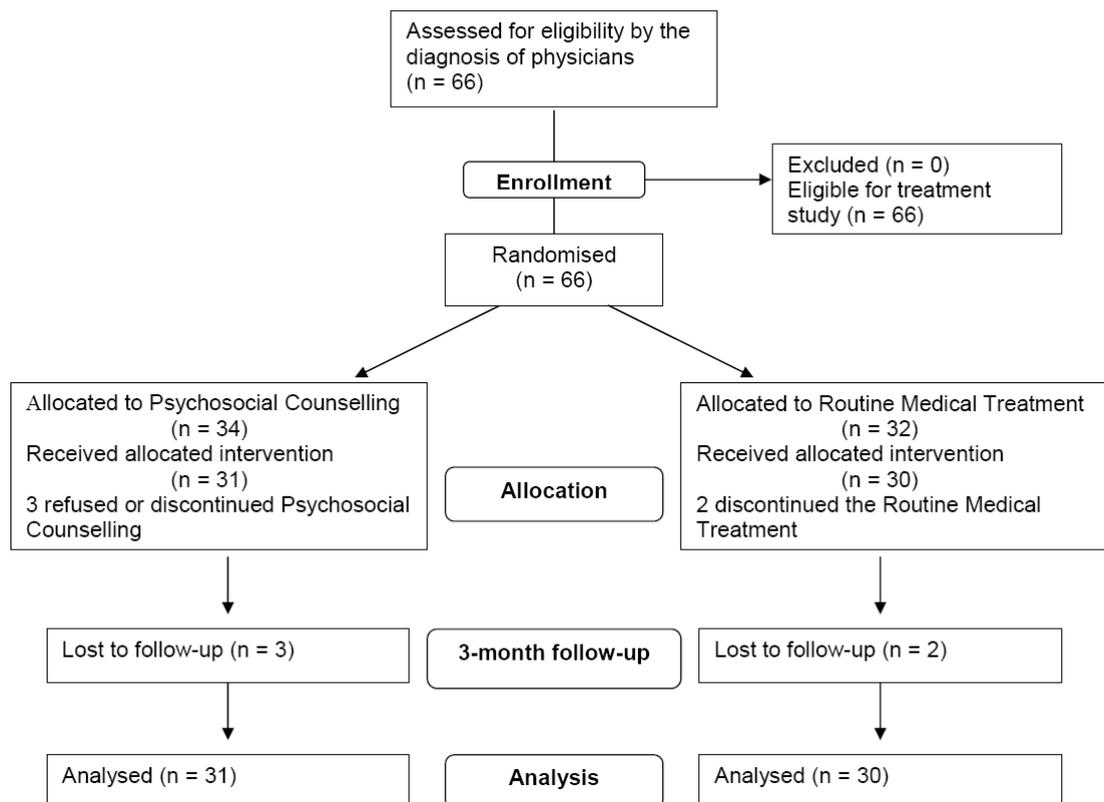
Table 1 gives a demographic overview of the sample, separately for each treatment condition. There were no systematic group differences in any of the socio-demographic variables. Patients of the counselling group reported no use of medication (herbal medication included) during the treatment or follow-up period and patients of the medication group (routine medical treatment) did not take any non-prescribed medication. For a detailed description of the prescribed medication see Table 1.

**Table 1:** Baseline sociodemographic characteristics of patients divided by groups ( $N = 61$ )

	Counselling G ( $N = 31$ )	Medication G ( $N = 30$ )	p
	<i>N</i> (%)	<i>N</i> (%)	
<u>Gender</u>			
Women	31 (100)	30 (100)	
<u>Ethnicity</u>			.45
Tajik	29 (93.5)	25 (83.3)	
Pashtun	1 (3.2)	2 (6.7)	
Uzbek	1 (3.2)	3 (10)	
<u>Religion</u>			
Muslim	31 (100)	30 (100)	
<u>Maritalstatus</u>			.69
Married	23 (74.2)	21 (70)	
Single	4 (12.9)	6 (20)	
Widowed	3 (9.7)	3 (10)	
Engaged	1 (3.2)	0 (0)	
<u>Education</u>			.42
None	21 (67.7)	24 (80)	
Primary school (1-4 years)	1 (3.2)	2 (6.7)	
Middle/high school (5-12)	8 (25.8)	4 (13.3)	
University	1 (3.2)	0 (0)	
<u>Employment</u>			.20
No	26 (83.9)	29 (96.7)	
Yes	5 (16.1)	1 (3.3)	
<u>Medication</u>			
Pain killer	0 (0)	18 (60)	
Pain killer & sleeping pills	0 (0)	4 (13.3)	
Antidepressants	0 (0)	4 (13.3)	
Antidepress. & sleeping pills	0 (0)	3 (9.9)	
Others	0 (0)	1 (3.3)	
<u>AgeM (range)</u>	31.2 (14-60)	35.3 (15-60)	.23

## Dropouts

In the counselling group, 3 patients (8.8%), one being male, dropped out of treatment. In the medication group (routine medical treatment), 2 patients (6.3%), both being male, did not complete treatment (see flow chart in Figure 1). Men dropouts of both treatment conditions reported not being able to afford the time to continuously visit the distantly located health care centre.

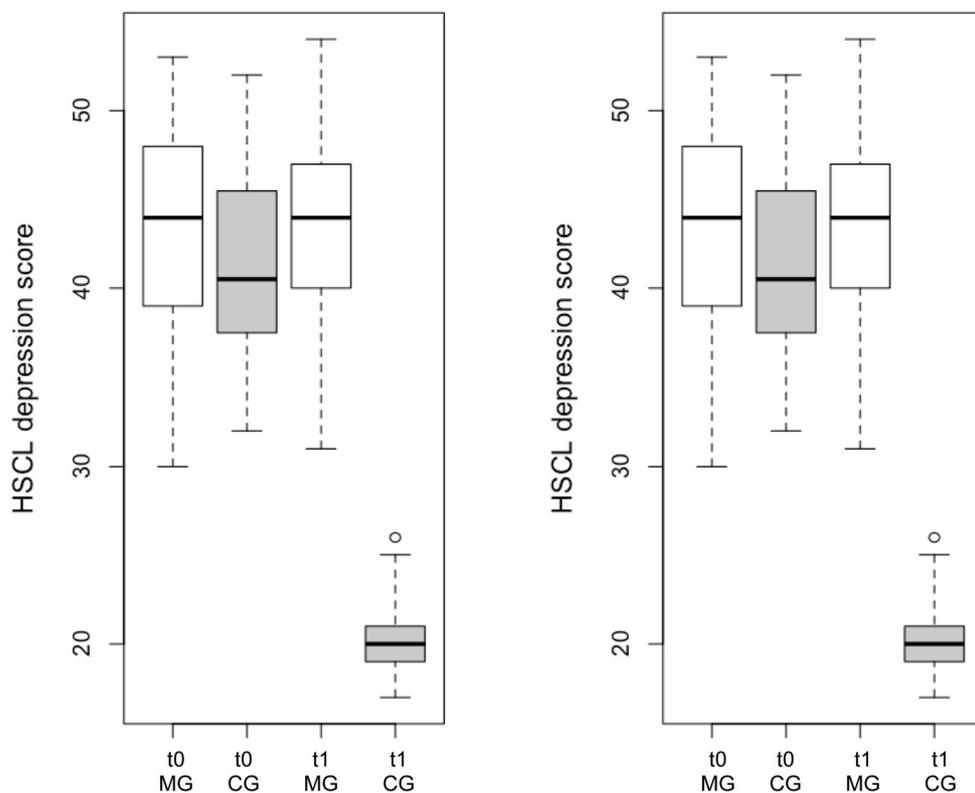


**Figure 1:** Flowchart of the study protocol

## Symptom reduction

We found a significant interaction of treatment x time in the HSCL depression score ( $F(1,59) = 175.21, p < .001, \eta_p^2 = .75$ ; which also produced a main effect ( $F(1,59) = 142.60, p < .001, \eta_p^2 = .71$ ). As illustrated in Figure 2a, pre-treatment depression scores were the same for the two groups (counseling  $M = 41.65, SD = 6.03$  and medication group  $M = 43.00, SD = 6.53$ ; two sample t-test,  $t(60) = -.84, p = .40, d = .22$ ). At 3-month follow-up, the

psychosocial counselling group showed significantly lower HSCL depression scores ( $M = 20.26$ ,  $SD = 1.95$ ) than the medication group ( $M = 44.10$ ,  $SD = 5.64$ ) (Mann–Whitney  $U$  test,  $U = .00$ ,  $z = -6.73$ ,  $p < .001$ ,  $r = 0.86$ ). While we found a large treatment effect size for the psychosocial treatment group in the reduction of the HSCL depression score ( $M = -21.39$ ,  $SD = 6.54$ , one sample  $t$ -test,  $t(30) = -18.21$ ,  $p < .001$ ,  $d = 3.27$ ), the change in the HSCL depression score in the medication group indicated that there was no improvement ( $M = 1.10$ ,  $SD = 6.73$ , one sample  $t$ -test,  $t(29) = .90$ ,  $p = .38$ ,  $d = .163$ ). A last observation carried forward analyses considering participants that dropped out revealed a similarly large significant treatment effect (Mann–Whitney  $U$  test,  $U = 16.50$ ,  $z = -6.79$ ,  $p < .001$ ,  $r = 0.84$ ).



**Figure 2a:** Change in HSCL-depression scores. **2b:** Change in HSCL-anxiety scores

Similar results were obtained for the anxiety scores (Figure 2b). In a repeated measures analysis of variance (ANOVA) with the HSCL anxiety score at pre-treatment and follow-up as the within-subject factor and psychosocial counselling versus medication as

between-subject factor was calculated. Again, a significant interaction indicated that the HSCL anxiety score decreased in the counselling but not the medication group ( $F(1,59) = 172.46, p < .001, \eta_p^2 = .75$ ; main effect  $F(1,59) = 198.89, p < .001, \eta_p^2 = .77$ ). Both groups had nearly identical values in their HSCL anxiety scores at pre-treatment (psychosocial counselling group:  $M = 29.52, SD = 4.63$ , medication group:  $M = 30.63, SD = 4.22$ , two sample  $t$ -test,  $t(60) = -.983, p = .329, d = .25$ ). At the time of post-treatment, the counselling group showed lower HSCL anxiety scores ( $M = 12.68, SD = 1.33$ ) than the medication group ( $M = 30.03, SD = 5.13$ ) (Mann–Whitney U test,  $U = 1.00, z = -6.74, p < .001, r = 0.86$ ). A last observation carried forward analyses revealed the treatment effect were about the same when drop outs are considered in the calculation (Mann–Whitney U test,  $U = 19.00, z = -6.78, p < .001, r = 0.83$ ). Again, the reduction of the HSCL anxiety scores revealed a large treatment effect size in the psychosocial counselling group ( $M = -16.84, SD = 4.87$ , one sample  $t$ -test,  $t(30) = -19.24, p < .001, d = 3.46$ ), while the change in the medication group was negligible ( $M = -.60, SD = 4.78$ , one sample  $t$ -test,  $t(29) = -.69, p = .497, d = .125$ ). Thus, only the psychosocial counselling significantly improved the depression and anxiety symptoms.

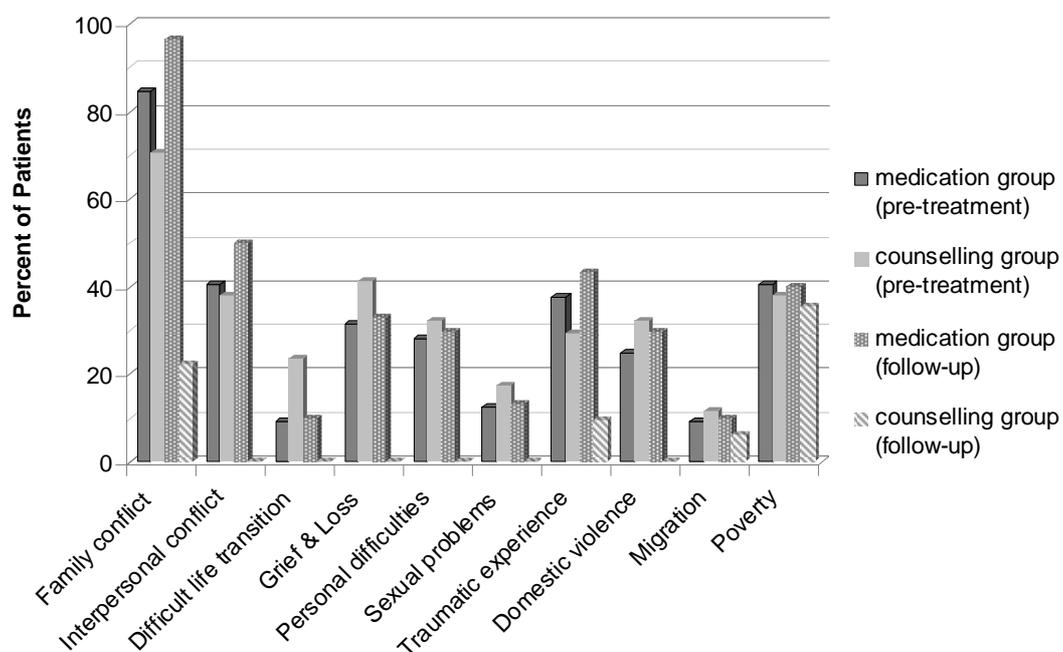
These findings are validated by further assessments through the M.I.N.I. and the Screening for Depression. Pre-treatment diagnoses of current major depression assessed through the M.I.N.I. did not differ between both groups (counselling group  $N = 27$  (87.1%), and medication group  $N = 27$  (90%);  $\chi^2(1) = .17, p = 1.00$ ). The percentage of counselling treatment patients meeting M.I.N.I. criteria for a diagnosis of a current major depression dropped to 0%, whereas 28 (93.3%) patients of the medical treatment met M.I.N.I. criteria for such a diagnosis at follow-up. The counselling and medication group significantly differed in the status of diagnosis for current major depression at follow-up ( $\chi^2(1) = 56.12, p < .001$ ).

The results of the Screening for Depression also show that in the counselling group the depression score significantly changed between pre-test and follow-up ( $M = -10.97, SD = 2.87$ , one sample  $t$ -test,  $t(30) = -46.97, p < .001, d = 3.82$ ). At the same time, the medication group showed an increase in symptom severity ( $M = 1.50, SD = 2.87$ , one sample  $t$ -test,  $t(29) = 2.81, p < .01, d = .57$ ). Additionally the Screening for Depression shows high correlations with the MINI ( $r = .424^{**}$ ) and the depression section of the HSCL 25 ( $r = .682^{**}$ ).

### Psychosocial stressors

Besides depression and anxiety symptoms, we assessed the psychosocial stressors reported by the patients. The average number of reported current psychosocial stressors was 3.51 ( $SD = 1.41$ ) for the whole sample. There was no significant difference between the groups before the treatment (psychosocial counselling group:  $M = 3.29$ ,  $SD = 1.37$ , medication group:  $M = 3.20$ ,  $SD = .96$ , two sample t-test,  $t(60) = -.30$ ,  $p = .768$ ,  $d = .08$ ).

The most frequent psychosocial stressor types were, family conflicts ( $n = 47$ ; 77%) and (inter)personal problems and difficulties such as issues of honour and shame ( $n = 41$ ; 67.2%). In addition, ongoing domestic violence appeared to be not unusual among interviewed patients ( $n = 16$ ; 26.2%). After the treatment, the patients in the counselling group reported fewer psychosocial stressors ( $M = .74$ ,  $SD = .68$ ) than the patients in the medication group ( $M = 3.57$ ,  $SD = 1.01$ ) (Mann–Whitney  $U$  test,  $U = 8.00$ ,  $z = -6.71$ ,  $p < .001$ ,  $r = .86$ ). Apart from poverty (35.5%), all reported stressors dropped to under 5% in the counselling group. Figure 3 provides a more detailed look at the specific types of psychosocial stressors and specific changes within treatment time for both groups



**Figure 3:** Psychosocial stressors

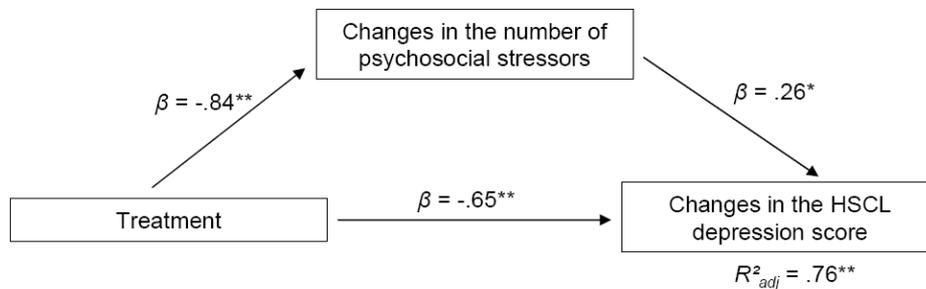
Counselling resulted in a large effect size for the reduction in the psychosocial stressors ( $M = -2.55$ ,  $SD = 1.18$ , one sample  $t$ -test,  $t(30) = -12.04$ ,  $p < .001$ ,  $d = 1.91$ ), whereas the patients of the medication group felt that their psychosocial stressors occurred more frequently at follow-up ( $M = .37$ ,  $SD = .61$ , one sample  $t$ -test,  $t(29) = 3.23$ ,  $p = .003$ ,  $d = .61$ ).

#### *The effect of psychosocial stressors on the symptom reduction*

We found a high correlation between the reduction of psychosocial stressors and the symptoms for both HSCL scores, depression ( $r_p = .81$ ,  $p < .001$ ) and anxiety ( $r_p = .82$ ,  $p < .001$ ). To analyse whether there was a treatment effect on the HSCL depression change in the counselling group besides the one reduction in psychosocial stressors, we performed a mediation analyses for the mediator *psychosocial stressors*. For the depression symptoms, the change in the HSCL depression score between pre-treatment and follow-up (*HSCL depression change*) was regressed on the change in psychosocial stressors (*psychosocial stressors change*) as well as on the *treatment* that was dummy coded with “0” for the medication group and “1” for the psychosocial counselling group in a first step. In a second step, the *psychosocial stressor change* was regressed on *treatment*.

Figure 4a shows that the reduction in the number and frequency of psychosocial stressors contributes to the reduction in the HSCL depression score ( $\beta_{\text{psychosocial stressor change}} = .26$ ,  $p = .031$ ) as indicated by the high correlation between these two variables. Still, as the treatment also accounts for the reduction in psychosocial stressors ( $\beta_{\text{treatment}} = -.84$ ,  $p < .001$ ), the treatment outcome in the HSCL depression score changes is therefore mediated via this indirect treatment effect. Moreover, there is also a direct treatment effect beyond the reduction of psychosocial stressors accounting for changes in the HSCL depression score ( $\beta_{\text{treatment}} = -.65$ ,  $p < .001$ ). These two variables are responsible for 76% of the variance in the HSCL depression score changes ( $R_{\text{adj}}^2 = .76$ ,  $F(2,58) = 95.87$ ,  $p < .001$ ,  $f^2 = 3.17$ ). The sample size for the regression analysis was sufficient as indicated by the calculated power ( $(1 - \beta) = 1.00$ ) using G x Power 3 (Faul et al., 2007). Moreover, a further analysis of the residuals on collinearity, normal distribution of the residuals, homoscedasticity and influence on outliers indicated that the proposed model fulfils all necessary quality criteria. Additionally, the interaction term *treatment x psychosocial stressor change* did not explain more variance significantly  $F(1,57) = .31$ ,  $p = .579$ ) indicating that the psychosocial stressor change mediates but not moderates the treatment

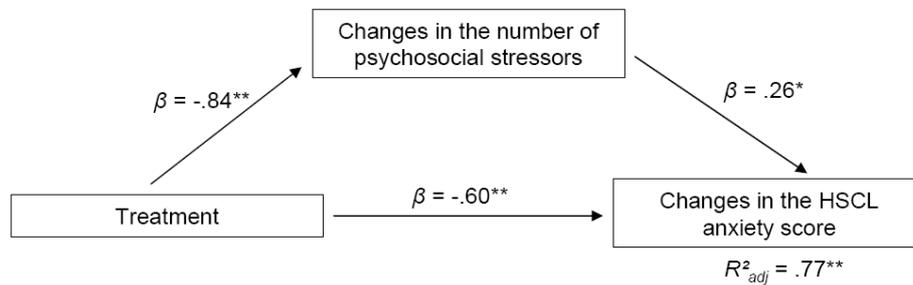
effect. Taken together, the psychosocial counselling had a large effect on the HSCL depression score changes.



**Figure 4a:** The effect of psychosocial stressors on the treatment outcome regarding depression

The same analysis was calculated for changes in the HSCL anxiety score (Figure 4b). The sample size was sufficiently large for the regression analyses ( $(1 - \beta) = 1.00$ ).

The reduction in the psychosocial stressors contributed to the reduction in the HSCL anxiety score ( $\beta_{\text{psychosocial stressor change}} = .26, p = .031$ ), likewise to the HSCL depression score. Also, the treatment accounted for the reduction in psychosocial stressors ( $\beta_{\text{treatment}} = -.84, p < .001$ ) and consequently had an indirect effect on the treatment outcome via this path. Moreover, also a direct treatment effect accounted for changes in the HSCL depression score ( $\beta_{\text{treatment}} = -.60, p < .001$ ). The regression model that included the two variables, treatment and psychosocial stressor change, had a large effect on the variance of the HSCL anxiety score ( $R_{\text{adj}}^2 = .77, F(2,58) = 98.51, p < .001, f^2 = 3.35$ ). The power in this model was sufficient ( $(1 - \beta) = 1.00$ ). As for the preceding model on HSCL depression change, an analysis of the residuals revealed that all necessary quality criteria were met. Moreover, there was no moderation effect of the psychosocial stressors.



**Figure 4b:** The effect of psychosocial stressors on the treatment outcome regarding anxiety

### Coping mechanism

Besides psychosocial stressors, we assessed coping mechanisms of the whole sample, with 56 (91.8%) patients being unable (scoring 0 and 1 on a 4-point likert-scale) to recognize a relationship between own symptoms and specific psychosocial stressors before treatment. At the same time, 55 (90.2%) patients were not able to manage or solve current conflicts (scoring 0 and 1 on a 4-point likert-scale). Again, at follow-up there was a significant between-group difference ( $t(59) = -28.58$ ;  $p < .01$ , with counselling patients showing improved coping strategies in all categories at follow-up ( $M = 2.39$ ;  $SD = .34$ ;  $t(30) = 28.33$ ;  $p < 0.01$ ). Such a change did not occur in the medication group (routine medical treatment) ( $M = .33$ ;  $SD = .21$ ;  $t(29) = -8.43$ ;  $p < .01$ ).

## 2.5. Discussion

We carried out a randomised clinical trial of psychosocial counselling in a sample of help-seeking Afghans suffering from psychosocial stress and mental illnesses. We assessed depression and anxiety symptoms, psychosocial stressors and coping abilities at pre-treatment and at 3-month follow-up to measure the stability of the treatment effects.

We found high rates of symptoms of depression and anxiety in the help-seeking patients prior to treatment. These findings are in line with surveys assessing prevalence rates of mental health symptoms among the Afghan population (Lopez Cardozo et al., 2004, 2005; Rasekh et al., 1998; Scholte et al., 2004). According to the interviews with the patients, factors that may have contributed to the high rates of depression and anxiety include daily stressors, such as loss of family members, ongoing war and poverty as well as continuous feelings of hopelessness and helplessness. These results are in line with findings of Miller and colleagues (2008) in Afghanistan.

The assumption that the counselling treatment would be superior to the routine medical treatment in terms of reducing symptoms and psychosocial stressors at follow-up was supported. Counselling patients reported fewer symptoms of anxiety and depression and less psychosocial stressors after the therapy, whereas these symptoms and stressors remained stable in the pharmacological treatment group. Actually, patients who had received routine medical treatment but no counselling, reported an increase of social stressors at the follow-up interview, indicating that prescription of medication had neither improved daily living conditions and nor coping strategies. This lack of significant effects in the medication condition could relate to the suboptimal pharmacological treatment. However, we would like to emphasize that, in line with Fournier's findings, the magnitude of benefit of antidepressant medication compared with placebo may be minimal or nonexistent, on average, in patients with mild to moderate depression symptoms (2010). Thus, the current effects may not necessarily be much improved with an optimised psychopharmacological treatment in this group of help-seeking patients.

Measures assessing symptom-reduction included the M.I.N.I., which revealed significant correlations with the depression scale of the HSCL 25. However, interferences from the HSCL 25 pertaining to depression and anxiety as psychiatric disorders have to be

drawn with caution because of cultural specifics as already pointed out by Ventevogel and colleagues (2007) in an earlier study in Afghanistan.

Arguably, the possibility to address ongoing stressful living conditions in the counselling sessions, taken by itself, considerably contributed to the massive treatment effects. Nevertheless, the counselling treatment enabled patients to gain a variety of coping abilities to successfully face the ongoing stressful living conditions in Afghanistan and to regain influence over their lives, thereby reducing the extent of social stress which is known to aggravate or even cause mental health problems (Lopez Cardozo et al., 2004; Miller, et al., 2008).

The improvement in mental health status following counselling found in the present investigation is consistent with the results of previous studies (Bolton et al., 2007; Jacob et al., submitted; Neuner et al., 2004, 2008; Rahman et al., 2008; Schaal et al., 2009). In line with this work, the present study showed that local men and women can be trained in a reasonable time period to effectively treat patients suffering from mental health problems. Additionally, the present findings indicate that a mere five counselling sessions can already improve the patient's mental health status significantly, corresponding with findings of Rahman(2008) and Schaal et al. (2009).

This indicates that psychosocial care can be an effective treatment even in low-resource settings of a war-affected country like Afghanistan.

Limitations of the study include that the number of counsellors and doctors involved was limited and the assessment was restricted to only one site. Security issues made it difficult to include more sites. Therefore, any generalization must be considered with care. A further methodological limitation is that the interviewers were not fully blind as to the treatment condition. For logistical and security reasons, our team was only able to send one Dari-speaking expert to Mazar-e-Sharif. This expert was commissioned to supervise the execution of the study, but was also involved in the conduction of interviews.

Finally, long-term effects should be investigated in order to potentially improve therapeutic techniques of the counselling treatment. As the counselling approach is a combination of different modules, hence a dismantling would be useful in further studies.

## **2.6. Conclusion**

To our knowledge, we have conducted the first randomised controlled trial of a counselling treatment in a sample of mental health patients in Afghanistan. In sum, we demonstrated that culturally sensitive counselling which draws on the personal resources of the patients and targets present psychosocial stressors can be an effective treatment in this war-affected society and under unsafe living conditions. The limited need of resources suggests that counselling service in countries comparable with Afghanistan may have the potential to support the re-establishment of well-functioning families and whole communities.

### 3. Study B: Continuous traumatic stress – the case of Afghan women

Sarah Ayoughi, Inge Missmahl, Inga Schalinski, Thomas Elbert

#### 3.1. Abstract

**Objective:** For more than 30 years, the Afghan people have suffered from the destructive consequences of armed conflict and burdensome living conditions. The uncontrollable potential threats of daily life amount to a situation of continuous stress, entailing the risk of serious mental suffering. Against this backdrop, the present study's aims to assess mental health in a sample of Afghan women, specifically considering the impact of enduring and traumatising threats. By this means, we intended to explore the phenomenon of continuous traumatic stress and sought to further delineate this emerging concept from the classic notion of PTSD.

**Methods:** The present study was conducted at a psychosocial counselling centre in Kabul, Afghanistan, among help seeking women (N = 50). Primary outcome measures were symptoms of depression and anxiety (HSCL-25), the perception of stress (PSS-10) and symptoms of traumatic stress (PSSI). Secondary outcome measures were psychosocial stressors and the exposure to domestic violence.

**Results:** Participants frequently presented with symptoms of depression and anxiety. The majority of the interviewed women also reported high rates of perceived stress. Average PDS scores were high (29.4). Ongoing violence within the family was reported by 86% of the interviewees. Symptom scores for traumatisation, depression and anxiety, the intensity of perceived stress and the number of stressors were all related. Therefore, we calculated partial correlations and found that the traumatic stress symptom severity acts as a moderator and accounted for an important part of the variance between these variables.

**Conclusion:** The present study shows the high distress of Afghan women caused by the ongoing unsafe living conditions in their war-torn country. Furthermore, the results prove that traumatic stress symptoms can also be evoked merely by the continual threats of daily life. Thus, the results support the demand for an extended model of PTSD, incorporating the continuous exposure to potential traumatic stress.

### 3.2. Background

Afghan people continue to suffer from the destructive consequences of armed conflict and burdensome living conditions. Recent studies investigating the mental health condition of the Afghan people report high rates of symptoms of depression and anxiety as well as a substantial prevalence of PTSD (Ayoughi et al. 2012; Catani et al., 2009; Lopes Cardozo et al., 2004, 2005; Scholte et al., 2004; Seino et al., 2008).

The latest surveys on the mental health status of the Afghan population conducted in 2002 and 2003 found extremely high rates of PTSD in women, varying between 31,9% and 48,3% (Lopez Cardozo et al., 2004, 2005; Scholte et al. 2004). Moreover, about 60 % of the participants reported multiple traumatic events (at least four but up to 16) during the last 10 years. The most common traumatising burden was the lack of resources such as water and medical care (up to 80%). Moreover, the various armed conflicts and the massive violence exerted by the Taliban over the course of the last 30 years were classified as traumatising by 30 to 70% of the participants (Lopez Cardozo et al, 2005; Scholte et al., 2004).

In line with these results are our observations of high rates of depression and anxiety symptoms during investigations of the efficiency of psychosocial counselling in North Afghanistan (Ayoughi et al., 2012). Documentations on the treatment sessions by the local counsellors indicated that almost all women suffered from ongoing severe and frequently even traumatic stress caused by recurring domestic violence and the unsafe living conditions in Afghanistan. Having survived a life-threatening situation easily cues an alarm response in an unsafe environment.

Other recent studies have not investigated the potentially traumatising effect, of daily psychosocial stressors and demanding living conditions. Miller and colleagues only assessed the prevalence of PTSD with regard to war related-events (Miller et al., 2009). In addition, Seino and colleagues assessed hardship regarding basic resources, but not in view of their potential to traumatise (Seino et al., 2008).

Studies investigating PTSD among women in comparable war-torn or conflict settings report equally substantial prevalence rates of exposure to traumatic stressors and PTSD (Schaal et al., 2011; Neuner et al., 2004; Onyut et al., 2009). In a study by Schaal and colleagues high rates of PTSD (41%) were found in a sample of widowed genocide

survivors in Rwandan, and comparable to studies in Afghanistan the participants experienced a high number of traumatic events, which originated in the past (Schaal et al., 2011).

In sum, the existing research on PTSD primarily focuses on individuals suffering from the consequences of traumatic events in the past. However, it does not adequately take into account the effects of ongoing stress and unsafe living conditions. Still, recent research suggests that consequences of exposure to traumatic stress are expressed differently, if victims experience a situation of ongoing threat, violence and insecurity (Starker, 1988; Diamond, 2010), a different treatment protocol is required for the affected youth (Starker, 1988). Weierstall and colleagues (2012, submitted) report that higher PTSD symptoms in people living in South Africa's townships predict lower psychosocial functioning and more future concerns. In addition, the study found that appetitive aggression moderates this relation and decreases trauma-related dysfunctions in both measures. Therefore, perpetrating further violent acts may facilitate adaptation in men and increase suffering in women living under unsafe conditions.

Diamond and colleagues (2010) assessed the prevalence of PTSD in an Israeli community exposed to continuous missile attacks over the course of seven years. Their results suggest an ongoing traumatic stress response towards ongoing insecurity. Moreover, they concluded that the classical PTSD as a consequence of a past traumatic event is not applicable in this setting (Diamond et al., 2010).

Starker investigates the situation in South Africa's townships where the traumatic stress is rather current than historic. He describes the ongoing unsafe living conditions of the youth living in townships as the essential element evoking symptoms of continuous traumatic stress. Starker concluded, that the definition of PTSD does not cover these circumstances and ongoing daily threats in South Africa's townships.

However, quantitative studies on continuous traumatic stress are lacking. Therefore, the present study aimed at investigating the mental health consequences of ongoing potential traumatic stressors, here referred to as "continuous traumatic stress". While living under unsafe conditions, an alarm response may be frequently cued by signals that are only potentially, but not actually life-threatening, such as a gunman or a car which could carry explosives. Moreover, domestic violence is a frequently co-occurring stressor in war-torn

societies. In contrast to the majority of PTSD patients who are treated in relatively safe environments, the reoccurrence of a traumatic event is not an unfounded fear for the participants of the current study, but rather a realistic scenario, even if the actual probability is not very high. This needs to be taken into consideration when interpreting the study's results. Consequently, this may result in a differing appearance of traumatic stress symptoms in situations comparable to the one of people living in today's Afghanistan.

The present study's aims to assess the mental health status in a sample of help-seeking Afghan women, specifically considering the impact of enduring and potentially threatening and thus traumatising threats. For this purpose, we investigated the prevalence of symptoms of anxiety and depression, traumatic stress, psychosocial stressors, experienced violence and perceived stress as well as their inter-correlations. By this means, we intended to explore the phenomenon of continuous traumatic stress and sought to delineate this emerging concept from the classic notion of PTSD.

### 3.3. Methods

#### *Setting*

The present study was conducted at a psychosocial counselling centre in Afghanistan's capital Kabul. This centre is located in a busy district near Kabul University which is inhabited by different ethnic groups with various socioeconomic backgrounds. The local counsellors were continuously educated and supervised by our group over a period of several years (since 2004) to provide psychotherapeutic counselling services to help-seeking Afghan men and women.

#### *Sample*

A sample of 50 Afghan women seeking help at the counselling centre was interviewed by our team. The exclusion criteria were only age below 14 years, probable schizophrenia (severe psychotic symptoms) and mental retardation, since the present investigation intended to draw a natural picture of the current symptom spectrum of Afghan women in need of counselling or psychotherapeutic assistance. All help-seeking women who did not meet the exclusion criteria (100%) were enrolled in the study. Written informed consent, explaining the procedure and the intention of the investigation, was read out to each participant. As the illiteracy rate of the sample was high (60%), participants willing to take part in the interview and the study gave written or oral consent. The study was approved by the Ethical Review Board of the University of Konstanz (Germany).

#### *Measures*

All instruments were translated into Dari using blind back translation. Experts checked discrepancies. Due to the high illiteracy rate, all instruments were used in the form of structured interviews in which questions were read aloud to the participants. Validity of the translations was inferred from earlier studies (Ayoughi et al. 2012, Catani et al., 2009)

**Sociodemographic characteristics.** Questions related to socio-demographic variables assessed information on the participant's age, ethnicity, religion, marital status, educational level, living arrangements, and financial situation.

**Psychosocial Stressor List.** For the assessment of psychosocial stressors, a checklist of 11 different types of stressors, which had been used in a previous study, was provided (Ayoughi et al., 2012). The following psychosocial stressors, which had been found to describe common problems in the Afghan society, were checked: *Family conflicts – interpersonal conflicts – difficult life transition – grief and loss – personal difficulties – sexual problems – single traumatic experience – domestic violence – migration – poverty – changing gender roles and values*. Subsequently, the interviewer documented the stressors scoring each psychosocial stressor as currently existent in the participant's daily life, regardless of whether it originates from an event in the past and/or in the present life of the participant.

**HSCL-25.** The Hopkins Symptom Checklist 25 was used to screen for symptoms of depression and anxiety (Derogatis et al., 1974). This screening tool is composed of a 15-item subscale for depression and a 10-item subscale for anxiety, with answer choices ranging from 1 (not at all) to 4 (extremely). It has been widely used in studies of refugees and war-affected populations (Lavik et al., 1999; Mollica et al., 1987), including five studies in Afghanistan (Ayoughi et al. 2012; Lopez Cardozo et al. 2004, 2005; Miller et al. 2008; Scholte et al. 2004). The screening instrument provides outcomes at symptom level. It has proven to be a reliable and valid instrument for measuring symptoms of depression and anxiety in various countries and cultures (Mollica et al., 1987).

**Posttraumatic Diagnostic Scale.** We included the Posttraumatic Diagnostic Scale (PDS, Foa et al., 1997) in its interview format (PSS-I) to explore whether the participants suffered from post traumatic stress symptoms. The PDS/PSSI is a 17-item screening instrument on a 4-point-Likert-scale (0 = not at all to 3 = very much). Validation studies have demonstrated the PDS's reliability and accuracy in assessing the severity of PTSD according to the DSM-IV criteria (Foa et al., 1997; Griffin et al., 2004; Ertl et al., 2010). Participants were asked to indicate which of the symptoms they had experienced within the four weeks preceding the interview. Because of the continuous, ongoing traumatic stress most of the Afghan women reported, the responses on the PDS/PSSI were based upon the participant's self-reported most stressful (traumatic) life situation (event) according to the Psychosocial Stressor List. This list functioned as the event list and was used for filling in the PDS.

**Perceived Stress Scale-10.** The Perceived Stress Scale (PSS) was used to assess the perception of stress over the course of the last month preceding the interview (Cohen et al., 1983). This instrument is designed to measure the degree to which situations in one's life are appraised as stressful and how unpredictable, uncontrollable, and overloaded respondents find their lives. The items are of a very general nature and therefore well applicable in the Afghan context. Answers were scored for each of the 10 items on a 5-point-Likert-scale between 0 (never) and 4 (very often). Scores range from 0 to 40 with higher scores indicating greater stress. The PSS-10 was found to have the same reliability and validity as the PSS-14 and is widely used in different settings (Oeruecue et al., 2008; Roberti et al., 2006). Moreover, studies have shown that the scale correlates with depression and anxiety (Cohen & Williamson, 1988).

**Continuous Traumatic Stress.** To date, validated instruments measuring the prevalence and severity of symptoms caused by continuous traumatic stress have not been developed. However, the combined outcomes of HSCL-25, PSS-10, PDS and present psychosocial stressors give indications as to the characteristics of continuous traumatic stress.

**Family Violence.** Family violence was defined as being exposed to physical, emotional, or sexual abuse according to a checklist developed and used by Catani and colleagues (Catani et al., 2008, 2009; Schauer et al., 2011). In close collaboration with experienced local counsellors and international mental health experts, the most suitable items for the Afghan context were chosen and additional items were added. The items intended to assess the amount of experienced different types of violence. Additionally, it was asked when the violence was experienced, in order to assess if the domestic violence is still ongoing.

### ***Procedure***

The study was carried out in March and April 2011 in Kabul. Diagnostic interviews were conducted by one local counsellor and one international expert fluent in the local language (Dari), both female. The two experienced interviewers already conducted diagnostic interviews in a previous treatment study in Afghanistan (Ayoughi et al., 2012) and in an epidemiological survey in Kabul (Catani et al., 2009). The interviews were carried out in the counselling centre in Kabul and did last about 2 hours. Afterwards, the mental

health condition of the participant was checked to assess whether she needed a subsequent counselling session conducted by the local counselor.

### *Analysis*

The statistical analysis was carried out using PAWS Statistics 18.0 (SPSS Inc., 2010). Descriptive Data are presented as frequencies, mean scores and standard deviations. To further investigate the associations between the continuous traumatic stress symptoms and other assessed variables, pearson correlations as well as partial correlations were calculated.

### 3.4. Results

#### *Baseline Characteristics*

50 Afghan women were interviewed and all of them were included in the data analyses. Table 1 gives a demographic overview of the sample.

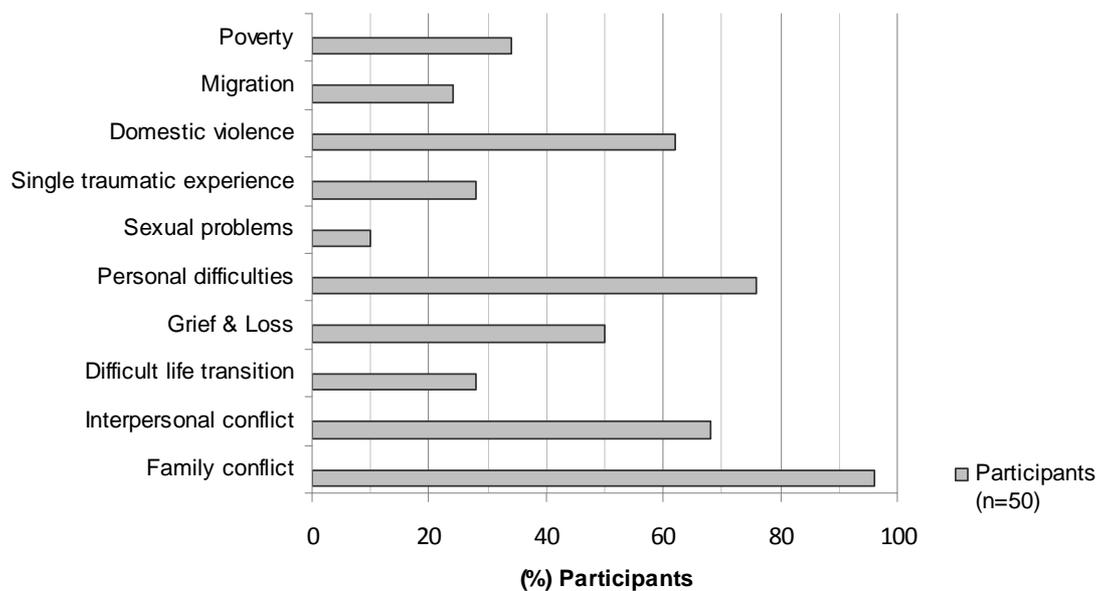
**Table 1:** Sociodemographic characteristics of the sample ( $N = 50$ )

	%
<u>Ethnicity</u>	
Tajik	48
Pashtun	14
Hasarah	38
<u>Religion</u>	
Muslim	100
<u>Marialstatus</u>	
Married	60
Single	18
Widowed	14
Engaged	8
<u>Education</u>	
None	60
Primary school (1-4 years)	4
Middle/high school (5-12)	34
University	2
<u>Employment</u>	
No	78
Yes	22
<u>Financial situation (enough money to feet the family)</u>	
Always enough money	54
Sometimes enough money	24
Never enough money	22
<u>People living in the household</u>	
1-5	12
6-10	64
11-15	24
<u>AgeM (range)</u>	
	34.7 (14-65)

### *Psychosocial stressors*

On average, the interviewed Afghan women reported suffering of 5.0 ( $SD = 1.4$ ) different psychosocial stressors at the time of the interview.

The most frequent psychosocial stressor types were family conflicts ( $n = 48$ ; 96%) and personal difficulties such as issues of honor and shame ( $n = 38$ ; 76%). Moreover, the prevalence of domestic violence appeared to be relatively high among the families of the interviewed women ( $n = 31$ ; 62%). More detailed results on this stressor will be presented in the outcomes of the questionnaire inquiring into family violence. Figure 1 provides a more detailed overview of the frequency of the reported psychosocial stressors.



**Figure 1:** Reported psychosocial stressors

### *Clinical data*

#### *Symptoms of depression and anxiety, perceived stress, and posttraumatic stress*

We found high rates of symptoms of depression and anxiety, as shown in table 2. Additionally, the majority of the Afghan women reported high rates of perceived stress (table 2). The calculated mean sum score of PTSD-related symptoms was relatively high,

indicating a high incident of *posttraumatic stress* among the participants (table 2). Remarkably, only 3 (6 %) of the interviewed women reported flashbacks.

**Table 2:** Means, standard deviations and correlations

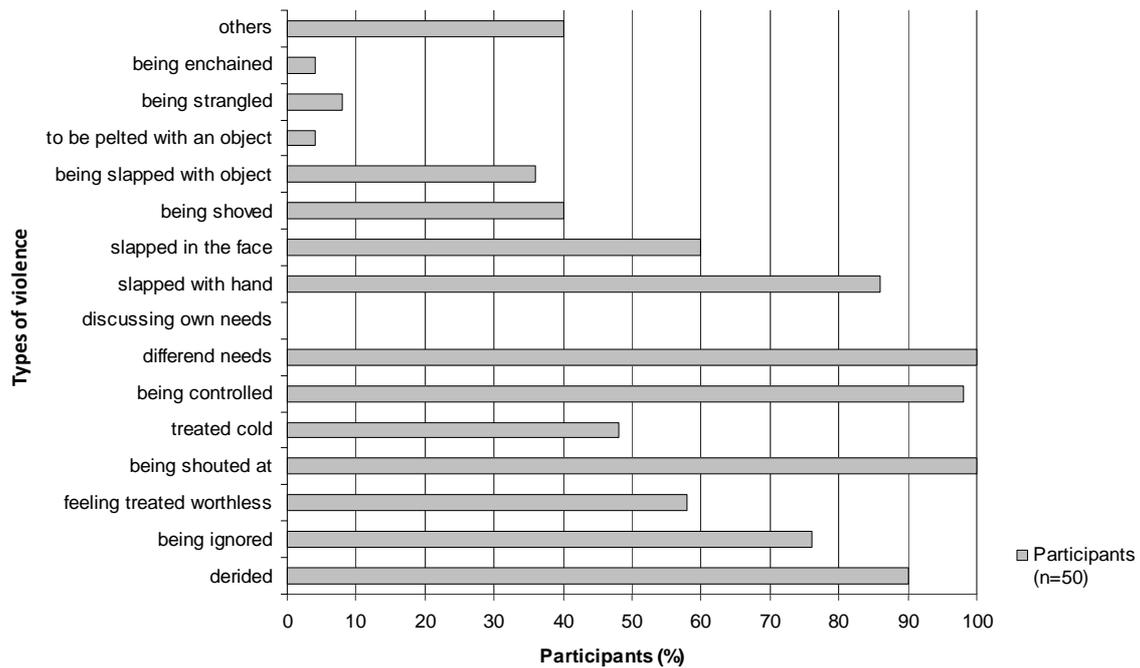
*Means (M), standard deviations (SD) and correlations for the HSCL depression and anxiety score, the perceived stress, the traumatic stress symptom severity, the experienced violence and the number of present stressors.*

Measure	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.
1. HSCL- depression score (Scores between 15-60)	43.6	8.1					
2. HSCL-anxiety score (Scores between 10-40)	29.9	5.8	.75*				
3. PSS - sum score (Scores between 0-40)	27.6	3.9	.79*	.74*			
4. Traumatic stress (PDS/PSSI) (Scores between 0-51)	29.4	8.3	.81*	.83*	.73*		
5. Experienced violence	8.5	3.0	.60*	.69*	.49*	.56*	
6. Number of present stressors	5.0	1.4	.49*	.68*	.55*	.63*	.62*

*Note.* \*  $p < .05$ .

### *Family violence*

All interviewed women reported at least one family violence type. On average, each participant reported to have experienced 8.5 ( $SD = 3.0$ ) different violence types in their near or extended family, including emotional and physical violence. Ongoing violence appeared in 86% of the participants' families. Figure 2 shows the frequency of different types of violence reported by the women, indicating a high level of emotional and physical aggression in Afghan families. In almost all cases (96%), heavy physical violence was committed by a male family member. Emotional violence appeared in all of the women's families. Especially, the freedom to realize one's own needs was not reported by a single participant.



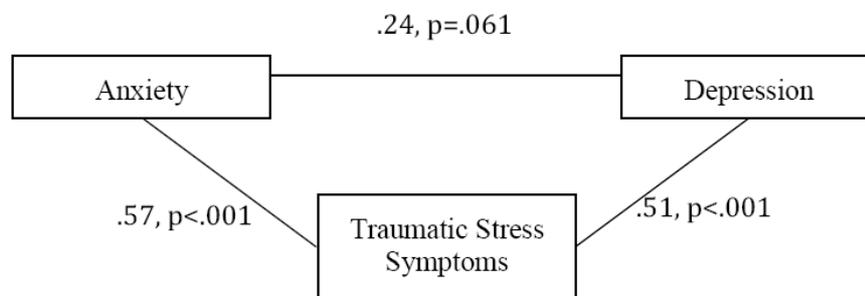
**Figure 2:** Experienced types of violence

### *Continuous traumatic stress (Correlation and partial correlations)*

Table 2 shows the inter-correlation between traumatic stress symptoms and mental health symptoms, perceived stress, experienced violence and number of current psychosocial stressors. The PDS, assessing symptoms of post traumatic stress, correlates significantly with the anxiety, depression and perceived stress sum score. Additionally, it is significantly related to the number of experienced violence types and the number of present psychosocial stressors.

PTSD symptom severity, depression and anxiety scores, perceived stress as well as the number of stressors all were substantially correlated with each other (compare table 2). Therefore, we utilized a further approach to disentangle partial relationships between depression, anxiety and PTSD symptom severity. To quantify the relationship between two variables while controlling for the effect of another score, partial correlations were calculated.

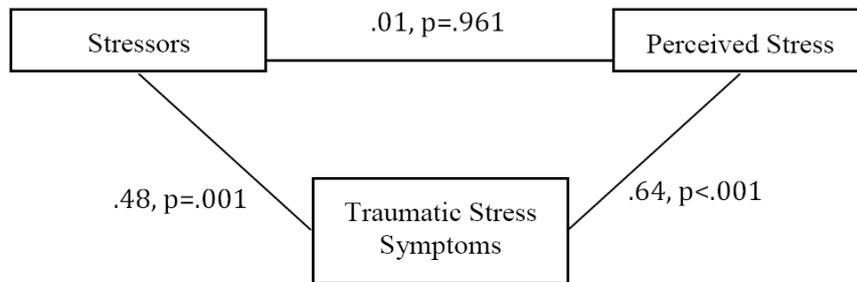
First, partial relationships were calculated for the symptom scores (depression, anxiety and PDS). The bivariate correlation between PDS symptom severity and the depression level was positive ( $r=.81, p <.001$ ). On examining partial correlations between the PDS symptom severity and depression, when controlling for the HSCL-anxiety score, a significant, but lower positive correlation remained ( $r= .51, p<.001$ ). Participants with higher levels of PDS symptoms reported higher levels of anxiety symptoms ( $r=.83, p<.001$ ). The partial correlation between the PDS symptom severity and the anxiety score, partialing out the HSCL-depression score was also significant ( $r=.57, p<.001$ ). Although the correlation between depression and the anxiety score was significant ( $r=.75, p<.001$ ), the partial relationship was considerably diminished ( $r= .24, p=.097$ ). This indicates that a significant part of the common variance of the HSCL depression and anxiety score is the same variance, which is accounted for by the PDS symptom severity. Once the PDS symptom severity has been partialled out, the variance between the depression and anxiety score was diminished (5.76%). Therefore, in this sample, the PDS symptom severity moderates a significant part of the relationship between the depression and anxiety levels (figure 3a).



**Figure 3a:** Partial correlation of anxiety – depression – traumatic stress symptoms

In a second analysis, partial relationships between perceived stress, PDS symptom severity and the number of stressors were calculated. Figure 3b summarizes the results. The relationship between PDS symptom severity and perceived stress was significant ( $r=.73, p<.001$ ) and also calculated with controlling for the number of stressors. The partial correlation coefficient for this positive relationship reaches significance ( $r=.64, p<.001$ ). The number of stressors was significantly related to the PDS severity ( $r=.55; p>.001$ ). When the influence of the perceived stress level was partialled out, the correlation was significant ( $r=.48, p<.001$ ). Whereas the number of stressors and the level of the perceived stress were

positively correlated ( $r=.55$ ,  $p<.001$ ), the correlation vanished when taking into account the influence of the PDS symptom severity. ( $r<.01$ ,  $p=.961$ ). Again, the PDS symptom severity acts as a moderator between the number of stressors and the perceived stress levels and accounts for an important part of the variance between these variables.



**Figure 3b:** Partial correlation of traumatic stress symptoms – number of stressors – perceived stress

### 3.5. Discussion

The present study aimed at investigating the prevalence and severity of anxiety, depression, perceived stress and traumatic stress and their relation to each other among Afghan women, hereby shedding light on the concept of continuous traumatic stress.

We found high rates of depression and anxiety symptoms as well as traumatic stress symptoms in help seeking Afghan women. Moreover, they reported to perceive their daily life as extremely stressful. These findings are consistent with other studies investigating the mental health condition of women and men in Afghanistan (Ayoughi et al., 2012; Lopez Cardozo et al., 2004, 2005; Scholte et al., 2004; Miller et al., 2008; Seino et al., 2008) and in line with findings among victims of conflict and violence in comparable settings, such as Uganda and Rwanda (Schaal et al., 2011; Neuner et al., 2004; Onyut et al., 2009). Taking into account the ongoing high exposure of the interviewed women to daily psychosocial stressors, such as violence and poverty, the dramatic health status of Afghan women indicates a crucial impact of war-affected, resource-poor settings and ongoing unsafe living conditions on the population's well-being.

The reported high rates of experienced violence by the interviewed women are in line with the result of previous treatment study being conducted in Mazar-e-Sharif (Ayoughi et al., 2012). In the present study, 86% of interviewed women reported that the experienced violence by husbands, parents or in-laws is ongoing and almost all of them described the violence as an endless traumatising event. This indicates that domestic violence is a not to be underestimated problem in stressed societies such as the Afghan society, which seems to explain the enormous variance in the experienced continuous traumatic stress of women. Arguably, the high prevalence of domestic violence can be associated with the experience of war and violent oppression, especially during the Taliban regime, fostering an aggressive behaviour as already shown in studies in comparable settings (Catani et al., 2008, 2009). In a previous study with children in Kabul, the extent of war experiences was a predictor of violence within the family (Catani et al., 2008, 2009).

In comparison to previous studies conducted in Afghanistan, the present study found that the combined effect of stressors, such as domestic violence and family conflicts, have the potential to be classified as traumatising by the participants (Lopez Cardozo et al., 2004; Miller et al., 2009; Scholte et al. 2004, 2005; Seino et al., 2008). Arguably, the setting of a

counselling centre enabled the women to talk more openly about extreme hardship regarding experienced violence, forced marriage and abuse within the family in their daily life, allowing us to identify those experiences as traumatic. Whereas interviews within previous surveys were conducted in the families' houses, where the women can not be certain about confidentiality on the part of their families, as they live very closely together with 6 to 12 members in about two or three rooms (Lopez Cardozo et al., 2004; Scholte et al. 2004, 2005; Seino et al., 2008).

To further approach the concept of continuous traumatic stress, it is important to draw attention that only very few women reported to have experienced flashbacks. This could be an indicator for a different appearance of traumatic stress in these women, who are still exposed to traumatic stress. This finding is in line with an observation by Diamond and colleagues (2010), who report less re-experiencing symptoms in their patients living under continuous missile attacks in Sderot, Israel. Moreover, the present results demonstrate that the assessed traumatic stress symptoms moderate the relation between assessed depression and anxiety symptoms as well as the relation between psychosocial stressors and the perceived stress level. These findings indicate that the experienced traumatic stress plays a crucial role in the formation and interaction of mental suffering.

This complex interaction of mental health indicators, in which the perceived traumatic stress plays a crucial role, in addition to the anomalous characteristics of traumatic stress, namely being exposed to ongoing and realistic threat and no experiences of flashbacks, has been referred to as the concept of *continuous traumatic stress*.

The present study faces a few limitations. Firstly, as Afghanistan is confronted with war, conflict and instability for more than 30 years, it is likely that not all experienced traumatic events could be recalled exactly, resulting in a certain inaccuracy in the reports. Secondly, the concept of continuous traumatic stress as investigated in this study could not be quantified sufficiently. We only explored indicators providing more precise explanations of the phenomenon. And finally, the limited sample size together with only a subset of potentially relevant symptom scores calls for additional studies. In zones of ongoing conflict, it seems difficult to conduct large-scale studies. Therefore, the concept of continuous traumatic stress must be further elaborated and rely on quite a number of studies. Although Starker (1988) as well as Diamond and colleagues (2010) draw conclusions from their observations regarding a modified treatment approach, systematic investigations are

needed to find practical implications for an evidence-based treatment for victims suffering from continuous traumatic stress.

In conclusion, the present study shows the high distress of Afghan women caused by ongoing, unsafe living conditions in the war-torn country. The results referring to traumatic stress indicate the demand for an extended model of PTSD, incorporating the continuous exposure to potential traumatic stress. This revision is essential to adequately comprehend, classify and treat the mental health suffering in unsafe environments such as Afghanistan, parts of Israel and South Africa's townships.

## 4. Study C: Mental health status of Afghan asylum-seekers and refugees living in Germany

Sarah Ayoughi, Inga Schalinski, Thomas Elbert

### 4.1. Abstract

**Objective:** The present study aimed at assessing the mental health status in a sample of Afghan asylum seekers and refugees in Germany. We specifically examined the exposure to and the impact of traumatic stressors, including organised and domestic violence. In addition, we compared the participants' mental health status in their home country with that in their host country. Furthermore, the study intended to explore what effects the restrictive living situation and legal status in Germany might have on the psychosocial well-being of asylum seekers.

**Methods:** The present study, conducted in Germany, investigated a convenience sample of Afghan men (N=27) and women (N=24), who were born in Afghanistan and have sought asylum in Germany. Using structured interviews, conducted in the refugee's native language by an interviewer with extensive experience of diagnostic work in various regions of Afghanistan, we examined the exposure to traumatic stressors including domestic violence and assessed symptoms of posttraumatic stress disorder (PSS-I), depression and anxiety (HSCL-25), as well as the perceived stress (PSS-10).

**Results:** All interviewees reported to have experienced traumatic events while still in their home country. In addition, the majority of the interviewed women reported that they had been exposed to domestic violence before arriving in Germany. Afghan men and women frequently presented with symptoms of depression. Female participants showed significantly higher rates of PTSD and anxiety symptoms than male participants. On average, participants perceived high stress levels due to their daily life as asylum seekers and refugees. Partial correlations suggest that the relation between the perceived stress level and PTSD is mediated through the severity of depression symptoms.

**Conclusion:** The present study shows how the distress of asylum seekers and refugees caused by traumatic events experienced in their home country interacts with the perceived stress during the asylum procedure in the host country. The results indicate that many

asylum seekers are in need of evidence-based measures of support and counselling in order to reduce suffering and to allow integration into the society of the host country.

## 4.2. Introduction

For more than five consecutive years, Afghanistan has continued to be the country with the most refugees under United Nations High Commissioner for Refugees (UNHCR) responsibility across the globe (UNHCR, 2005-2012). As of 2011, there were 2.7 million Afghan refugees with numbers still on the rise (UNHCR, 2012). While 95% of them reside in neighbouring Pakistan and Iran, approximately 3% flee to European countries, often taking extreme and life-threatening risks in the course of their flight. In 2011, 7,800 Afghan refugees have claimed asylum in Germany (UNHCR, 2012). They represent the largest group of the total 46,000 asylum seekers registered by the German authorities in that year (UNHCR, 2012).

The massive flood of refugees from Afghanistan has been attributed to the ongoing internal conflict, the burdensome living conditions and the insecure future of the country. Apart from trying to escape the general insecurity of their living conditions, many Afghans flee their home country because they are the individual victims of violence, harassment or persecution (Kassam & Nanji, 2006). Psychosocial stressors such as family conflicts, and domestic violence add to the traumatic stressors (Ayoughi et al., 2013, under review). Consequently, the mental health situation of Afghans in their home country is devastating (Ayoughi et al., 2012; Catani et al., 2009; Lopes Cardozo et al., 2004, 2005; Scholte et al., 2004; Seino et al., 2008). For instance, a mental health survey showed that 73% of the participants suffered from symptoms of depression and 84% from those of anxiety (Lopes Cardozo et al., 2004, 2005).

Many refugees arriving in their host countries continue to suffer from distress and mental health symptoms such as depression and post-traumatic stress symptoms (de Jong et al., 2001; Mollica, 2001; Fazel & Wheeler, 2005). A German survey assessing the mental health status of asylum-seekers from various countries found that 40% of newly-arrived refugees fulfilled the criteria of PTSD (Gabel et al., 2006). A further study showed that the prevalence of mental disorders is even higher in those who have stayed for a decade or more in the host country (Lersner et al., 2008a, b). However, the review by Fazel and Wheeler, (2005) also demonstrates the considerable variance among refugee groups, depending on the individual experience in the home country and the societal acceptance in the host country (Miller et al., 2005). Despite the high proportion of Afghan refugees and asylum seekers, studies investigating their specific mental health condition are rare. One study conducted in

the Netherlands showed that this group on average reported more traumatic events (about 7 out of 17 items) and had a higher risk of developing PTSD and depression than refugees from other countries (Gerritsen et al., 2006).

While having escaped the living conditions in their home country inducing their flight, refugees and asylum-seekers are confronted with new problems and challenges in their host countries. Among others, their social isolation and socio-economic limitations as well as their unstable visa status and the lack of occupation can cause further distress and mental health problems (Jablensky et al., 1992; Miller, 2002, Mollica et al., 2002). An exploratory study conducted at a refugee camp in Karachi (Pakistan) showed that Afghan refugees suffer from changes in their physical, social and cultural environment (Kassam & Nanji, 2006). In particular, the limited space and the missing privacy in the refugee camps as well as the lack of activities and the impossibility to work caused hardship and distress in the Afghan community (Kassam & Nanji, 2006). A further study conducted in New Zealand and Australia showed that even after many years of resettlement, Afghan refugees still experience distress caused by both, the memories of the past and the social isolation and unemployment in the presence (Sulaiman-Hill & Thomson, 2012).

The present study aimed at assessing the mental health status in a sample of Afghan asylums-seekers and refugees living in Germany, including a gender comparison. Therefore, the prevalence and correlation of past and present traumatic experiences and stress-related symptoms were assessed. Moreover, the present findings were compared with the mental health condition of interviewed Afghans still living in Afghanistan in order to draw conclusions on the mental health condition of the present sample.

### 4.3. Methods

#### *Setting and participants*

The study was carried out under the sponsorship of the psychological research and outpatient clinic for refugees at the University of Konstanz (Germany). Afghan men and women were invited for diagnostic interviews through existing contacts with refugee focal points and aid organisations in Konstanz, Karlsruhe, Düsseldorf and Hamburg. Out of 56 Afghans invited for interviews, the vast majority (N=51) participated in the study. Those who turned down our invitation (two people) indicated they did not have enough time for an interview. Three were unable to keep the appointment due to unforeseen circumstances. In addition, only three were referred to the refugee clinic for diagnostic examination by aid organisations and lawyers. Inclusion criteria were age above 16 years; place of birth in Afghanistan and claim for asylum in Germany. Exclusion criteria were schizophrenia, mental retardation, and neurological lesions. However, none of the participants met these exclusion criteria and all were enrolled into the study. Participants gave written informed consent. The study protocol was approved by the Ethical Board of the University of Konstanz.

#### *Measures*

All instruments were translated into Dari using blind back translation. Experts checked discrepancies. All instruments were used in the form of structured interviews. The validity of the translations was inferred from earlier studies (Ayoughi et al., 2012, submitted; Catani et al., 2009).

**Sociodemography.** Questions related to socio-demographic variables assessed information on the participant's age, ethnicity, religion, marital status, educational level, living arrangements, and financial situation. Additionally, we inquired about the participant's immigration process in order to assess the immigration status and the satisfaction with the current situation in Germany.

**Event list of current and past traumatic experiences.** For the assessment of traumatic experiences the Event Checklist of the Clinician Administered PTSD Scale (CAPS) was used, consisting of war-related events which are commonly reported by refugees (Blake et al., 1990). Further stressful events, such as poverty and social exclusion,

were added to the check list. It finally consisted of 20 different event types. Additionally, it was asked when the event was experienced, in order to assess if the situation is confined to the past or still ongoing and thus has the potential to become a *continuous traumatic stress situation* (Ayoughi et al., submitted).

**Psychosocial Stressor List.** For the assessment of psychosocial stressors, a checklist of 11 different types of stressors was developed in the course of two previous conducted studies in Afghanistan (Ayoughi et al., 2012, submitted). In order to draw conclusions on the mental health condition of Afghans living in Germany, this checklist was used in order to have comparable variables. The following psychosocial stressors were checked: *Family conflicts – interpersonal conflicts – difficult life transition – grief and loss – personal difficulties – sexual problems – single traumatic experience – domestic violence – migration – poverty – changing gender roles and values*. Subsequently, the interviewer documented the stressors scoring each psychosocial stressor as currently existent in the participant's daily life, regardless of whether it originates from an event in the past and/or in the present life of the participant.

**Domestic Violence.** Domestic violence was defined as being exposed to physical or emotional abuse within the family according to additional items of the event list. The items intended to assess the amount of experienced different types of domestic violence.

**HSCL-25.** The Hopkins Symptom Checklist 25 was used to screen for symptoms of depression and anxiety (Derogatis et al., 1974). This screening tool is composed of a 15-item subscale for depression and a 10-item subscale for anxiety, with answer choices ranging from 1 (not at all) to 4 (extremely). It has been widely used in studies of refugees and war-affected populations (Lavik et al., 1999; Mollica et al., 1987), including six studies in Afghanistan (Ayoughi et al., 2012; submitted; Lopez Cardozo et al., 2004, 2005; Miller et al. 2008; Scholte et al. 2004). Although not sufficient for diagnosis the screening instrument has proven to be a reliable and valid instrument for measuring the symptoms of depression and anxiety in various cultures and countries (Mollica et al., 1987).

**Perceived Stress Scale-10.** The Perceived Stress Scale (PSS) was used to assess the perception of stress over the course of the last month preceding the interview (Cohen et al., 1983). This instrument is designed to measure the degree to which situations in one's life are appraised as stressful and how unpredictable, uncontrollable, and overloaded

respondents find their lives. The items are of a very general nature and therefore well applicable in the context of Afghan asylum seekers. Answers were scored for each of the 10 items on a 5-point-Likert-scale between 0 (never) and 4 (very often). Scores range from 0 to 40 with higher scores indicating greater stress. The PSS-10 was found to have the same reliability and validity as the PSS-14 and has been widely used in different settings (Oeruecue et al., 2008; Roberti et al., 2006). Moreover, studies have shown that the scale correlates with depression and anxiety (Cohen & Williamson, 1988).

**Posttraumatic Diagnostic Scale.** We included the Posttraumatic Diagnostic Scale (PDS, Foa et al., 1997) in its interview format (PSS-I) to explore whether the participants suffered from post-traumatic stress symptoms (Foa & Tolin, 2000). The PDS/PSSI is a 17-item screening instrument on a 4-point-Likert-scale (0 = not at all to 3 = very much). Validation studies have demonstrated the PDS's reliability and accuracy in assessing the severity of PTSD according to the DSM-IV criteria in different cultural settings (Foa et al., 1997; Griffin et al., 2004; Ertl et al., 2010). Participants were asked to indicate which of the symptoms they had experienced within the four weeks preceding the interview. The responses on the PDS/PSSI were based upon the participant's self-reported most stressful (traumatic) life situation according to the event list of current and past experiences.

### ***Procedure***

The study was carried between November 2011 and April 2012 in Germany. Diagnostic interviews were conducted by an expert from the University of Konstanz, fluent in the local language (Dari). The experienced interviewer already conducted diagnostic interviews in previous settings in Afghanistan (Ayoughi et al., 2012, submitted). The interviews were carried out either in the psychological research and outpatient clinic for refugees at the University of Konstanz or at refugee residences and focal points of aid organizations in Konstanz, Karlsruhe, Düsseldorf and Hamburg. Each interview did last about two hours. Afterwards, the mental health condition of the participant was checked and further consultation was offered in order to stabilize the condition of the participant if necessary.

### *Analysis*

The statistical analysis was carried out using PAWS Statistics 18.0 (SPSS Inc., 2010). Descriptive data are presented as frequencies, mean scores and standard deviations. To further investigate the associations between the symptomatology and other assessed variables, pearson correlations as well as partial correlations were calculated.

## 4.4. Results

### *Sociodemographic characteristics*

All 51 respondents were included in the data analyses. Table 1 gives a demographic overview of the sample.

Interviewed Afghan men and women significantly differ in their educational background (t-test,  $t(49) = 4.86, p < .001$ ). All of the interviewed men attended school for at least three years. In comparison, 33 % of the Afghan women did not attend school at all. Apart from sociodemographic facts, we assessed the participant's immigration process and residence status. 49% of the participants were asylum seekers at the time of the interview. 43 % had received a temporary residence permit. Only 6% had been granted an indefinite residence permit. 51% of the interviewed Afghan men and women rated their current living conditions in Germany as much better than theirs in Afghanistan. Only 4% of the participants valued those worse than in their home country. The responses concerning the most pressing problem at the time of the interview significantly differed between men and women (independent t-test,  $t(49) = -2.28, p = .027^*$ ). 70% of the interviewed men rated the immigration process in Germany as currently most stressful, whereas women reported to suffer likewise under personal and family problems (29%/33%).

**Table 1:** Sociodemographic characteristics of participants divided by sex ( $N = 51$ )

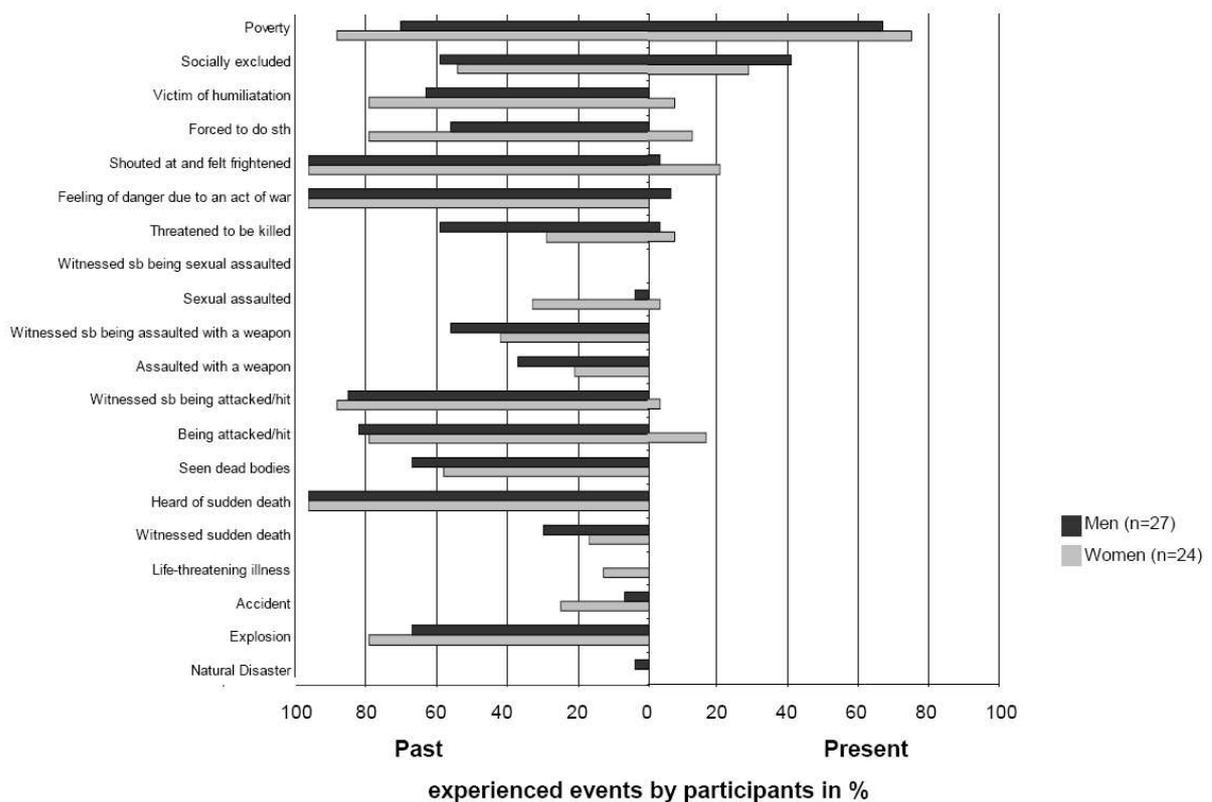
	Women ( $N = 24$ ) $N$ (%)	Men ( $N = 27$ ) $N$ (%)	$p$
<u>Ethnicity</u>			.27
Tajik	18 (75.0)	15 (55.6)	
Pashtun	0 (0.0)	2 (7.4)	
Hazara	5 (20.8)	7 (25.9)	
Uzbek	0 (0.0)	1 (3.7)	
Other	1 (4.2)	2 (7.4)	
<u>Maritalstatus</u>			.06
Single	3 (12.5)	10 (37.0)	
Married	14 (58.3)	14 (51.9)	
Divorced/separated	2 (8.3)	1 (3.7)	
Widowed	5 (20.8)	1 (3.7)	
<u>Occupation/Job Afghanistan</u>			.00*
Yes	0 (0.0)	16 (59.3)	
No	24 (0.0)	11 (40.7)	
<u>Occupation/Job Germany</u>			.37
Yes	6 (25.0)	10 (37.0)	
No	18 (75.0)	17 (63.0)	
<u>Immigration status</u>			.08
Asylum seeker	9 (37.5)	16 (59.3)	
Temporarysuspension of deportation	0 (0.0)	1 (3.7)	
Temporary residence permit	13 (54.2)	9 (33.3)	
Permanent residence permit	2 (8.3)	1 (3.7)	
<u>Living arrangement</u>			.56
Refugee residence	14 (58.3)	16 (59.3)	
Own apartment	10 (41.7)	8 (29.6)	
Shared household	0 (0.0)	3 (11.1)	
<u>Living conditions in Germany compared to Afghanistan</u>			.07
Much better	15 (62.5)	11 (40.7)	
Somewhat better	8 (33.3)	12 (44.4)	
About the same	1 (4.2)	2 (7.4)	
Somewhat worse	0 (0.0)	2 (7.4)	
Much worse	0 (0.0)	0 (0.0)	
<u>Current most pressing stressor</u>			.03*
Immigration process	9 (37.5)	19 (70.4)	
Personal problems	7 (29.2)	4 (14.8)	
Family problems	8 (33.3)	4 (14.8)	
<u>Age</u> $M$ (range)	36.8 (20-60)	31.0 (16-60)	.84
<u>Years of education</u> $M$ (range)	4.3 (0-11)	9.4 (3-16)	.00*
<u>Years in Germany</u> $M$ (range)	6.2 (1-22)	3.0 (0-12)	.04*

Note: \* =  $p < .05$

**Past and current traumatic experiences**

We used an event list consisting of 20 different event types to assess past and current traumatic experiences. On average, male participants reported 10 types of past traumatic experiences ( $SD = 2.5$ ), while female participants reported 11 ( $SD = 2.4$ ). There was no significant difference between the groups (independent t-test,  $t(49) = -.54, p = .590$ ).

The most frequent event types experienced in the past were “experienced an explosion” (female 79%; male 67%); “heard from a sudden death of a close person” (female and male 96%); “being attacked or hit” (female 79%; male 82%) and socioeconomic difficulties such as “poverty” (female 88%; male 70%). Figure 1 provides a more detailed illustration of the specific types of traumatic events of the past and present



**Figure 1:** Experienced event types in the past and present separated by sex

We further assessed if the event types are currently present in the life of the participants (figure 1). Reported event types dropped in both groups, with men experiencing on average one and women two event types in their present life, showing no significant group differences (independent t-test,  $t(49) = -1.51, p = .138$ ). The most frequent event

types experienced in the present were “poverty” (female 75%; male 67%) and the perception of “being socially excluded” from the German society (female 29%; male 41%).

### ***Psychosocial Stressors***

On average, the interviewed Afghan men and women reported suffering of 3 ( $SD = 1.2/ SD = 0.8$ ) different psychosocial stressors. The most frequent psychosocial stressor types named by women were poverty (67%), suffering of a traumatic experience (58%) and the migration process (54%). Men reported similar frequencies, perceiving traumatic experiences (82%) and the migration process (63%) as most stressful. There were no significant group differences (independent t-test,  $t(49) = .40, p = .890$ ).

### ***Domestic Violence***

88% of the interviewed women had experienced violence within the family in their past. On average, the women experienced four different types of violence, such as being beaten (79%), humiliated (38%) and sexual assaulted (29%). In comparison, men reported significantly fewer experiences with domestic violence (independent t-test,  $t(49) = -3.50, p < .001$ ). Men reported on average two types of experienced violence in their family. Being shouted at (67%) and beaten (59%) as a child were most common among the men.

With regard to their current life, experienced domestic violence was rarely reported by the participants. Women reported on average one event type. 96% of the interviewed men stated not to suffer from any violence within the family. There are no significant gender differences in respect of the present life (independent t-test,  $t(49) = -1.14, p = .261$ ).

### ***Clinical data***

#### *Symptoms of depression and anxiety, Posttraumatic Stress Disorder and perceived stress*

We found relatively high rates of symptoms of depression in both sexes as shown in table 2. The women showed significantly higher rates of anxiety symptoms than the men (independent t-test,  $t(49) = -2.16, p < .05$ ). We did not find such a group difference for depression symptoms (independent t-test,  $t(49) = -1.96, p = .055$ ). The calculated mean sum score of PTSD-related symptoms was significantly higher among women than among men (independent t-test,  $t(49) = -2.2, p < .05$ ), indicating a higher incident of posttraumatic stress

among the women of the sample (table 2). Additionally, the majority of participants reported the perception of stress (table 2), showing no significant group differences (independent t-test,  $t(49) = -.63, p = .529$ ).

Finally, we compared the present clinical outcomes with the mental health status of earlier interviewed women living in Afghanistan (compare Ayoughi et al., submitted). The assessed mental health symptoms of participants being interviewed in Afghanistan were significantly higher than those of the present sample (Table 2), showing significant group differences in PTSD (independent t-test,  $t(99) = -5.76, p = .025$ ), anxiety (independent t-test,  $t(99) = -5.76, p < .001$ ), depression (independent t-test,  $t(99) = -8.06, p < .001$ ) and perceived stress (independent t-test,  $t(99) = -5.71, p < .001$ ).

**Table 2:** Group means, standard deviations and differences of clinical data for female and male participants

	Women living in Afghanistan* (n=50)		Women (n=24)		Men (n=27)		Statistics for group differences between men and women living in Germany	
	M	SD	M	SD	M	SD		
PTSD	29.4	8.3	21.54	10.05	14.70	11.94	$t(51) = -2.22$	$p < .05$
PDS - sum score/ Scoring between 0-51								
Anxiety	29.9	5.8	20.42	5.91	16.82	5.99	$t(51) = -2.16$	$p < .05$
HSCL - sum score/ Scoring between 10-40								
Depression	43.6	8.1	33.50	6.38	29.85	6.84	$t(51) = -1.96$	$p = .055$
HSCL- sum score/ Scoring between 15-60								
Perceived Stress	27.6	3.9	23.83	4.31	23.00	4.99	$t(51) = -.63$	$p = .529$
PSS - sum score/ Scoring between 0-40								

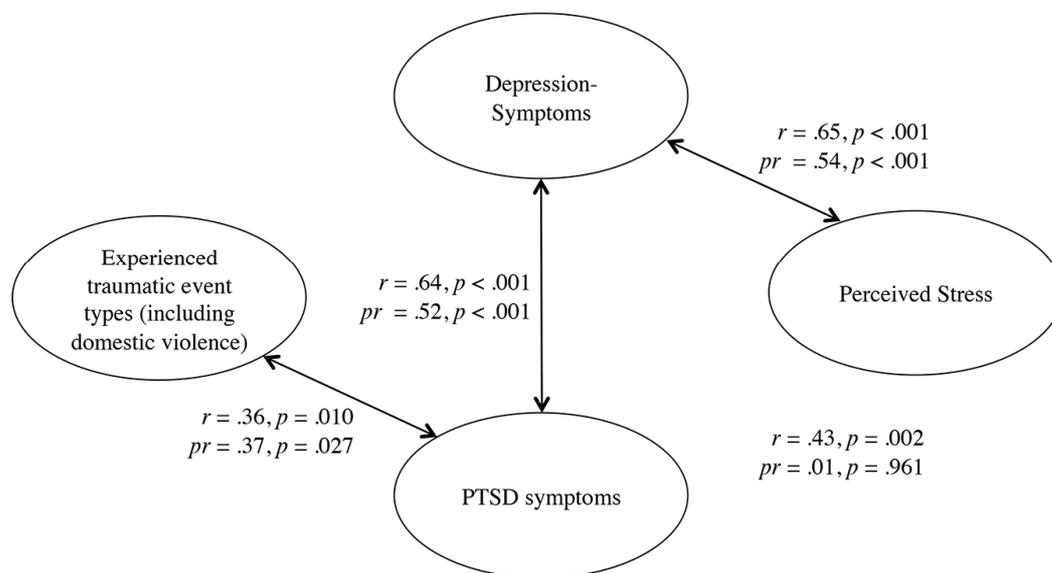
Note. Mean (M), Standard Deviation (SD), absolute number of respondents (n), PTSD= Posttraumatic Stress Disorder. For group differences, t-tests were used for continuous variables.

\* The results are presented in Ayoughi et al., submitted

### Correlation and partial correlations

PTSD and depression symptoms, perceived stress and the number of traumatising events (including domestic violence) experienced in the past, seem to be intercorrelated (figure 2). We examined partial relationships to disentangle the associations. Participants who experienced more traumatising events in the past exhibit more PTSD symptoms ( $r = .36, p = .010$ ). After controlling for the perceived stress level as well as the depression symptoms, a significant positive relationship remained between the number of traumatizing

events and the PTSD symptoms ( $pr = .37, p = .027$ ). Depression symptoms and the number of traumatizing event types were neither significantly correlated ( $r = .18, p = .195$ ) nor partially associated ( $pr = -.09, p = .532$ ). The history of traumatizing events was not associated with a higher level of perceived stress ( $r = .18, p = .204$ ). The partial relationship revealed no significant relationship ( $pr = .08, p = .604$ ). There was a significant correlation between the clinical symptoms of depression and PTSD ( $r = .64, p < .001$ ). Furthermore, the associations between the clinical symptoms persisted after controlling for the influence of the number of traumatizing events and the degree of perceived stress ( $pr = .52, p < .001$ ). Those with a higher level of perceived stress seem to suffer more from depression symptoms ( $r = .65, p < .001$ ). The correlation between the depression symptoms and the perceived stress remained positive after partialing out the number of traumatizing events and the PTSD symptoms ( $pr = .54, p < .001$ ). The PTSD symptom severity seems to be correlated with the perceived stress level ( $r = .43, p = .002$ ), whereas the association between the PTSD and the perceived stress vanished when considering the variation of the depression symptoms and the perceived stress level ( $pr = .01, p = .961$ ).



**Figure 2:** Pearson's correlations ( $r$ ) and partial correlations ( $pr$ ) of experienced traumatic event types (including domestic violence) – PTSD-symptoms – depression-symptoms – perceived stress

#### 4.5. Discussion

The current study aimed to investigate gender differences and relations in the mental health situation of Afghan asylum seekers and refugees residing in Germany. Outcome measures were PTSD, depression and anxiety symptom severity as well as experienced domestic violence and perceived stress.

Symptoms of depression were equally high in men and women. PTSD and anxiety symptoms were primarily present in the female participants, indicating a higher incident of posttraumatic stress and domestic violence among the women of the sample. The men reported almost as many experienced traumatic event types as the women. Both groups reported at least 11 different traumatic event types experienced in the course of their lives. Most of the described event types, such as having witnessed an explosion or having heard of the sudden death of a beloved one, originate from their time during the war in their home country. According to these findings is a further study, reporting similar high rates of traumatic experiences in Afghan asylum seekers in the Netherlands (Gerritsen et al., 2006). In addition, the present study aimed at assessing whether the sample suffers from a continuous traumatic stress situation, a concept which has been explored in a previous study in a sample of Afghans still living in their home country (Ayoughi et al., submitted). As hypothesized, none of the present participants reported to be currently confronted with any of the event types asked for, indicating that the asylum seekers and refugees rate the present situation in Germany as more secure.

Nevertheless, most of the participants reported to perceive their present life in the Germany as stressful. According to the interviews, factors that may have contributed to the high rates of perceived stress include the long-winded immigration process, the difficult socioeconomic circumstances and the feeling of being socially excluded from the society. These results are in accordance with findings of Sulaiman-Hill and Thomson, who conducted a study with Afghan refugees in New Zealand (2012) and Kassam and Nanji, who explored the psychosocial situation of Afghan refugees in Pakistan (2006). Both studies emphasized the negative effects of the stressful adaptation process on the refugees' quality of life in their host country (Sulaiman-Hill & Thomson, 2012; Kassam & Nanji, 2006). Gerritsen and colleagues report that the most stressful post-migratory factor in their sample of asylum seekers, including Afghans, was the uncertainty and length of the immigration process (Gerritsen et al., 2006). In the present study, the male participants perceived the

immigration process as very stressful, whereas the women likewise suffered from family and personal conflicts. This difference may be traced back to the fact that Afghan men generally take the sole responsibility for the family's socioeconomic status and independence. Being unable to influence their life situation may therefore be perceived as a heavier stressor by the male participants.

Former experiences of domestic violence were significantly higher in the women's group than in the men's group. In accordance with two previous studies carried out in Afghanistan (Ayoughi et al., 2012, submitted), the present sample of women almost invariably reported to have experienced ongoing violence in their near and extended family, such as being shouted at, beaten or sexually abused. The female participants reported a significant decrease in experienced violence with regard to their present life in Germany, indicating that the current living conditions have a positive influence on domestic violence. These results are consistent with Catani, who hypothesized a transmission of war-related violence to the family level (2010).

Finally, we compared our data on the mental health situation in Afghanistan with the results of the present study. By this means, we might be able, on a qualitative level, to draw conclusions on the development of the mental health situation of Afghan refugees after their arrival in Germany. The data assembled in Germany indicates a significant reduction of experienced psychosocial stressors and an improvement of a number of symptoms in comparison to Afghans living in their home country (Ayoughi et al, 2012, submitted). But the vast majority of refugees reported new stressors such as the uncertainty of their residence status and the feeling of being socially excluded (Ayoughi et al, 2012, submitted; Catani et al., 2009; Lopes Cardozo et al., 2004; 2005; Scholte et al., 2004; Seino et al., 2008). These stressors may result from the participants' inability to integrate into society because their residence status debars them from taking up employment or attending career training. Apart from the economical benefits, other studies have shown that the ability to take up paid work (even if it is only granted for a limited period of time) helps to significantly improve the mental health situation of refugees (Mollica et al., 2002).

The present study faces a few limitations. We did not systematically assess the difficulties of the immigration process; our findings are more of an explorative character. In a further study, this shortcoming should be taken into account and the present life of the asylum seekers and refugees should be investigated systematically and delimited from

their former life in their home country. Moreover, we only can draw qualitative conclusions on the change in the mental health status after the arrival of Afghans in the host country by comparing two convenience samples, namely Afghans still reside in their home country and of Afghan refugees and asylum seekers living in Germany.

Overall, the present findings indicate the need for evidence-based treatment including counselling in order to support Afghan asylum-seekers and refugees to recover from their mental health condition and to integrate themselves into the German society. While the majority of them continue to suffer from the experiences of the past, they are also confronted with the challenges of their uncertain future in their host country. In this study, especially women reported post-traumatic stress symptoms which can be treated successfully. In a randomized controlled trial, Neuner and colleagues demonstrated the efficacy of psychological treatment of PTSD in a sample of asylum seekers living in Germany (Neuner et al., 2010). A further treatment study by Renner and colleagues conducted in Austria showed that social support not only significantly reduces anxiety and depression in refugees and asylum seekers from Afghanistan, but also improves their adaptation to the societal conditions of their host country (Renner et al., 2012).

Asylum seekers and refugees may have a serious chance to largely recover from the traumatic events that they had experienced in their home countries. They may regain functioning, through a) structuring the traumatic memories by means narrative exposure therapy in those who continue to suffer from the past and b) social support that allows acceptance by and integration into the host society with hopes for the future.

## **5. Publications and submitted manuscripts that form part of the doctoral thesis**

### Study A:

#### **Provision of mental health services in resource-poor settings: A randomised trial comparing counselling with routine medical treatment in North Afghanistan (Mazar-e-Sharif)**

Sarah Ayoughi, Inge Missmahl, Roland Weierstall, Thomas Elbert

*Published in BMC Psychiatry*

I designed the treatment study and coordinated the cooperation with Afghan health facilities. I recruited the participants and carried out a large number of interviews in Afghanistan. I prepared a database and performed the statistical analyses with the support of Roland Weierstall. I prepared the manuscript under the supervision of Prof. Dr. Thomas Elbert.

### Study B:

#### **Continuous traumatic stress – the case of Afghan women**

Sarah Ayoughi, Inge Missmahl, Inga Schalinski, Thomas Elbert

*Submitted*

I designed the study which was carried out in Kabul, Afghanistan. With the support of Inge Missmahl, I coordinated the cooperation with a local counselling centre. I carried out all interviews in a team with my Afghan colleague Miss Abeda and prepared the database. I performed the statistical analysis and evaluated the results with the support of Inga Schalinski. Finally, I drafted the manuscript under the supervision of Prof. Thomas Elbert.

*Study C:***Mental health status of Afghan asylum-seekers and refugees living in Germany**

Sarah Ayoughi, Inga Schalinski, Thomas Elbert

*Submitted*

I designed the study which was conducted in Germany. I coordinated the cooperation with the different refugee residences as well as focal points of aid organisations in Germany and carried out all interviews. I prepared the database and performed the statistical analyses with the support of Inga Schalinski. I evaluated the results and prepared the manuscript under the supervision of Prof. Dr. Thomas Elbert.

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