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ADJUSTMENT DISORDER NEW MODULE: THE ADAPTION AND VALIDATION OF A SELF-REPORT QUESTIONNAIRE FOR THE ASSESSMENT OF ADJUSTMENT DISORDER

Master's Thesis

Running head: The Adaption of ADNM

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Contents

Abstract

Currently, Adjustment Disorder is viewed in diagnostic manuals as an exclusion diagnosis. There is evident need to better delineate between Adjustment Disorder and other disorders commonly overlapping with this disorder. The aim of this study was to validate the Estonian version of the ADNM (Adjustment Disorder New Module) questionnaire (Maercker et al., 2007) assessing patients recently diagnosed with Adjustment Disorder. In order to adapt and validate this questionnaire, a sample of clinical patient group (n=46) was obtained and data was collected using a package of self-report questionnaires (ADNM questionnaire, EST-Q-2; BDI; GHQ-26 and PCL-C). Logisical regression analysis was used to predict the odds ratios of the presence of Adjustment Disorder and correlations between the ADNM questionnaire, other measuring instuments and the psychiatric diagnoses. The results showed that the subscale of the ADNM questionnaire which had been added Estonia-specific items yielded significant correlations with the EST-Q-2 Fatigue and Depression category. Based on the current sample, the overall validity of the questionnaire is poor – thus giving evidence that the diagnosing criteria of Adjustment Disorder might be specific to cultural backgounds.

Keywords: adjustment disorder, questionnaire, conscripts, reliability, validity

Kokkuvõte

Uue kohanemishäire ADNM küsimustiku adapteerimine ja valideerimine

Kohanemishäire diagnoosi vaadeldakse diagnostilistes juhistes välistava kriteeriumina. Uuringud näitavad, et kohanemishäire diagnostilisi kriteeriume on vaja oluliselt paremini defineerida, et seda selgemalt eristada mitmetest häiretest, mis kohanemishäire kriteeriumiga osaliselt kattuda võivad. Käesoleva uurimustöö eesmärk on hiljuti kohanemishäirega diagnoositud katseisikute peal valideerida Eesti versioon ADNM (Adjustment Disorder New Module) küsimustikust (Maercker et al., 2007). Küsimustiku adapteerimiseks ja valideerimiseks koguti kliiniline valim (n=46), kellel paluti täita küsimustike pakett (ADNM küsimustik, EST-Q-2; BDI, GHQ-26 ja PCL-C). Logistilist regressioonianalüüsi kasutati selleks, et leida šansside suhe ADNMi järgi kohanemishäire läve ületamise, ülejäänud mõõteriistade ja psühhiaatrilise diagnoosi vahel. Tulemustes nähtus, et ADNMi alaskaala, millele lisati Eesti spetsiifilisi väiteid, korreleerus EEK-2 asteenia ja depressiooni alaskaalasega. Üldine ADNMi valiidsus käesoleva valimi põhjal hinnatuna oli nõrk – seega andis uuringu tulemus tõendust, et kohanemishäire diagnoosimine võib olla kultuurispetsiifiline.

Võtmesõnad: kohanemishäire, enesekohased küsimustikud, ajateenistujad, reliaablus, valiidsus

I Introduction

1.1 Overview of Adjustment Disorder

1.1.2 Current Diagnostic Criteria

According to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV-TR) (APA, 2000) and International Classification of Diseases 10 (ICD-10) (WHO, 1992) Adjustment Disorders (AD) are described as psychological reactions to various stressors (*Appendix B*). While the DSM-IV-TR enlists ADs in a separate and independent diagnostic category and does not link AD to stress-related disorders, i.e Post Traumatic Stress Disorder (PTSD) or Acute Stress Disorder (ASD), the ICD-10 groups AD in the Neurotic, Stress-related and Somatoform group of disorders (F40-F48). ICD-10 categorizes it in a subcategory F43 Reaction to Severe Stress – specifically F43.2: Adjustment Disorders. According to the diagnostic manual, AD is characterised by states of subjective distress and emotional disturbance, usually interfering with social functioning and performance, arising in the period of adaptation to a significant life change or a stressful life event. The ICD-10 divides ADs into specified diagnostic groups depending on the most predominant symptom: Brief Depressive Reaction (F43.20); Prolonged Depressive Reaction (F43.21); Mixed Anxiety and Depressive Reaction (F43.22); With Predominant Disturbance of Other Emotions (F43.23); With Predominant Disturbance of Conduct (F43.24); With Mixed Disturbance of Emotions and Conduct (F43.25); With Other Specified Predominant Symptoms (F43.28) (WHO, 1992). In order to diagnose AD, the symptoms have to occur for the first time within one month (WHO, 1992) or three months (APA, 2000) following the beginning of the stressor.

1.1.3 The Prevalence of Adjustment Disorder

The onset of AD is found to be elicited by various stressful life events or significant changes in a person's life. The existing research carried out in the field has identified military deployment and conscription as a potential trigger for the development of AD (Fielden, 2012; Hansen-Schwartz, Kijne, Johnsen, & Andersen, 2005; Juursoo 2011; Niebuhr, Powers, Krauss, Cuda &, Johnson, 2003; Perera, Suvendraan, & Mariestella, 2004). There have been a number of studies identifying other common contributers as a likely cause for AD – e.g. adjustment problems due to a significant change in one's

living environment, such as moving to a different country, specifically to do with migration in conflict zones (Dobricki, Komproe, de Jong, & Maercker, 2010) or cultural integration issues (Zaiontz, Arduini, Buren, & Fungi, 2012). AD might also be facilitated by various somatic illness, e.g. cancer (Mitchell et al., 2011), hyperventilation syndrome (Lung, Lee, & Huang, 2012) or chronic pain (Chan, Hadjistavropoulos, Carleton, & Hadjistavropoulos, 2012).

Although there have been a number of publications investigating the prevalence of AD, it has proven challenging to estimate this, resulting in multiple reports showing a variety of prevalence rates. The most recent epidemiological studies have estimated the prevalence rates to be between 5-50% as reviewed by Einsle, Köllner, Dannemann, & Maercker (2010) and between 7-34% as reviewed by Maercker et al. (2012). Commonly studies have been looking into the prevalence of AD in the primary care setting and it has been concluded that in this setting, the prevalence ranges between 11-18% (Casey, 2009). However, in a recent meta-analysis Mitchell et al. (2011) reviewed 94 interview-based studies assessing the prevalence of Depression, Anxiety and AD in oncological, haematological and palliative-care settings. Their analysis of palliative-care settings covered 24 studies with a sample size of 4007 people across 7 countries and concluded that 9,6% of patients suffered from Major Depression, 9,8% from Anxiety Disorders and 15,4% from AD. Other results based on 70 studies with 10 071 patients across 14 countries in the oncological and haematological setting show that 14,9% of patients suffer from Major Depression, 10,3% from Anxiety Disorders and 19,4% from ADs.

1.1.4 Duration and Characteristics of Adjustment Disorder

Outlining the prevalence of AD leads to elaboration of the duration and characteristics of this mental illness. Hansen-Schwartz et al. (2005) studied the course of AD among Danish male conscripts – they found that the mean time period for conscripts being excluded from service and admitted into a psychiatric clinic for psychiatric assessment was 79 days (i.e 2-3 months, ranging from 1-281 days). To demonstrate the characteristics of AD, the authors found that testing the conscripts at the time of enrollment to the army, at the time of admittance to a psychiatric facilty and finally at the time of leaving the facility, the symptom scores fell rapidly during the time of treatment at the facility. This implies that the severity of AD symptoms decrease when the stressful stimulus is removed. However, while the main reason for the

symptom reduction might be the removal of the stressful stimulus, Hansen-Schwartz et al. (2005) emphasize that the purpose of the treatment of this disorder is not to be undervalued – this is likely to contribute towards the long term outcome of the mental well-being of the patients.

Many studies have shown that AD is associated with a heightened risk of suicidality (Bolu, Doruk, Özdemir, & Özgen, 2012; Casey & Bailey, 2011; Kryzhanovskaya & Canterbury 2001; Na et al., 2013; Pelkonen, Marttunen, Henriksson, & Lönnqvist, 2007). As reviewed by Fielden (2012), as many as 26% of completed suicides in military deployment had an AD diagnosis. In a study comparing patients who had attempted suicide, subsequently diagnosed either with Major Depressive Disorder or AD, Lindqvist, Träskman-Bendz, & Vang (2008) remarkably found that there was no difference in the degree of suicidal intent between these groups – the authors therefore emphasize that while patients suffering from AD may suffer from a less severe illness than Major Depressive Disorder patients, they have a high intent to die when attempting suicide. The study also showed that patients diagnosed with AD exhibited a positive correlation between suicidal intent and the HPA-axis activity. As the suicidal process for AD patients is shorter and there are often no earlier psychopathological signs (Portzky et al., 2005), it also suggests that their biological reactions correspond to that of healthy individuals (Lindqvist et al., 2008).

Portzky, Audenaert, & van Heeringen (2005) conducted a study looking into the suicide cases of 19 adolescents – all cases analysed had been diagnosed with a psychiatric disorder at the time of death. Results showed that when taking comorbidity into account, 13 subjects had a diagnosis of Depression, 4 subjects of AD, 1 of Eating Disorder, 1 of Schizo-Affective, 1 of Gender Identity Disorder and 1 of Reading Disorder – 8 had also been diagnosed with a Personality Disorder. In another, recently conducted study looking into the cases of 82 patients who had been admitted to a psychiatric hospital as an inpatient and had been diagnosed with AD, Bolu et al. (2012) conclude that 22 of those patients were later admitted to the clinic by suicide attempt.

1. 2 The Problem Areas in Diagnosing Adjustment Disorder

1.2.1 Adjustment disorder controversy in DSM-V

AD is a diagnosis most frequently perceived as an exclusion diagnosis (Casey, Dowrick, & Wilkinson, 2001; Israelashvili, 2012; Semprini, Faava, & Sonino, 2010). Currently, it seems the AD diagnosis is chosen when several mental health problems are evident and there is confusion in classifying them (Israelashvili, 2012). In the wake of the new DSM-5, there is much research being carried out in trying to establish more poignant diagnostic criteria for AD (Boelen & Prigerson, 2012; Bryant, Fernandez et al. 2012; Friedman, Spiegel, Ursano, & Strain, 2011; Friedman et al., 2011; Kaplow, Layne, Pynoos, Cohen, & Lieberman, 2012; Shear et al., 2011; Zisook et al., 2012). While the predominant part of literature pursuing to specify the criterium and concept of AD focuses on carrying out clinical research on patient groups, Israelashvili (2012) sets to define the term *adjustment*. He proposes that as it is currently difficult to differentiate between adjustment problems, coping, maladjustment and adapting, as well as bereavement – perhaps AD should be conceptualized as transitional disorder encompassing all of the previous in its criteria? The new DSM-5 is considering creating a new diagnostic entity – Adjustment Disorder Related to Bereavement – hence eliminating the current bereavement exclusion from the diagnostic criteria (Kaplow et al., 2012). However, there is much debate whether a new beareavement category should be encorporated in the new DSM-5 (Boelen & Prigerson, 2012; Shear et al., 2011) and how to solve the differential diagnosis issues arising from the many similarities of symptoms between AD, Depression and bereavement. Stating that the diagnostic criteria for bereavement could potentially indulge clinicians to stigmatizing a normal reaction to the loss of a loved one, Zisook et al. (2012) suggest that the diagnosis of beareavement should be overall removed from the DSM-5. Their recent meta-analysis demonstrates how the criteria for beareavement is too overlaping with Major Depressive Disorder (MDD) and could therefore lead to a number of patients being misdiagnosed and furthermore, not receive appropriate treatment. These findings are strongly supported by Wakefield (2012) who emphasizes that creating a new grief-related AD would significantly pathologize normal grief responses. In contrast to the previous approach, Shear et al. (2011) argue that as grief is a discrete syndrome recognizable across different

cultures, it would make sense for Complicated Grief to be a new diagnostic category. Furthermore, they stress that the diagnosis of AD is reserved for a disparate group of syndromes which do not fit elsewhere and grief should thereby be given a separate diagnostic group. This argument is supported by Boelen & Prigerson (2012) who also point out that grief should indeed stand as a disorder on its own – they note that this would also facilitate further research in specifying what counts as a complicated grief. Therefore, while the new DSM is due to be released within the near future, much research is yet to be undertaken in determining the more accurate and empririically proven diagnostic criteria and grouping of stress related responses and AD.

1.2.2 Differential Diagnosis of Adjustment disorder

One of the problems with diagnosing AD is the possible overlap this disorder might bare with other disorders which commonly manifest in social and professional dysfunctioning. There have been numerous studies trying to distinguish between the differences of Depression and AD (Casey et al., 2006; Casey & Bailey, 2011; Casey & Doherty, 2012; Fernandez et al. 2012; Jeong, Ko, Han, Kim, & Joe, 2013; Wakefield, 2012).

In a recent study looking at the prevalence of AD in primary care patients in Catalonia, Fernandez et al. (2012) found that while the prevalence of this disorder was 2.94%, it is particularly interesting to note that merely 2 of the 110 cases detected as AD using the SCID-I (Structured Clinical Interview for DSM-IV Axis I Disorders) were actually detected by General Practitioners. These findings demonstrate a clear need for reviewal of the diagnostic criteria for AD and a shift of this mental illness from an exclusion disorder into a more clearly distinguishable and well formulated diagnostic criteria. Several studies stress that the importance of specifying the diagnostic criteria for AD is especially crucial in preparing for the DSM-5 and the ICD-11 (Fernandez et al., 2012; Maercker et al., 2012). While the release of DSM-5 has provoked numerous studies in pursuit of specifying the diagnostic criteria for this disorder, it is likely this shift of diagnostic criteria might occur over a longer period of research and empirical support for the proposed changes. One new approach suggests that AD be linked to PTSD and ASD – thus placing AD on a the beginning of a continuum which ends with other stress reactions, namely ASD and PTSD (Strain & Friedman, 2011).

It is explained by Casey and Doherty (2012) that the current diagnostic criteria in diagnosing AD does not delineate well between a normal stress reaction and a pathological one – hence stressing the need for shaping the AD model into a more precise criteria and incorporating the specified criteria into pre-existing structured clinical interviews. As the study of Fernandez et al. (2012) clearly demonstrated, there is an evident need to assist in correlating the screening measurements and clinical interviews of AD more highly.

1.3 Adjustment Disorder New Theory

Based on the literature reviewed evidence that there is a lack of clearly defined diagnostic certainty for AD, a new AD theory has been developed. The Adjustment Disorder New Theory (ADNT) (Maercker, Einsle, & Köllner, 2007) is based on the assumption that the current diagnostic criteria for AD are inadequate. Maercker et al. (2007) base their new theory on stress reaction, thereby suggesting similarities with the concepts of ASD and PTSD. Although developed only over the past few years, the new AD theory has gained noticeable support. In the build up to the DSM-5, this approach has been receiving strong support in research reviewing the classifications of stress related disorders – similarly to what the ADNT strives to implement, it has been proposed to group ADs with other disorders which constitute the range of reactions to environmental stressors (Friedman et al., 2011) and also create a new ASD/PTSD subtype for ADs (Bryant et al., 2011). Current diagnostic criteria in the DSM-IV state that AD should not be diagnosed if the symptoms enact with another Axis I disorder, such as Depression or anxiety disorder. Therefore, Maercker et al. (2007) conclude that most clinicians use AD diagnosis as an exclusion criterion for affective or anxiety disorders. The new theory is a modified approach to a recent concept of stress-response syndromes (Horowitz, 2004) and proposes that rather than assuming that AD bears similarities with Depression and anxiety disorder, it should be built upon the psychological models of PTSD. ADNT assumes that the central symptoms of AD include three core symptom categories: intrusive symptoms/ruminations, avoidance behavior and Failure to Adapt (*Table 1*). Diagnostically, the new concept of AD aims to group AD together with PTSD, ASD and also complicated grief. The difference between PTSD and ADNT comes from the difference in the stressor – the authors specify that the stressor for ADNT is not as lethally threatening and traumatizing as it is for PTSD. As the ADNT draws

similarities with the concept of PTSD, it suggests that intrusions and avoidance are manifested as core symptoms of this disorder too and the development of those symptoms could be explained in a similar manner as in trauma theories (e.g. Brewin & Holmes, 2003; Ehlers & Clark, 2000; Foa, 2011). As the current criteria for AD does not include a specific list of triggering symptoms, Maercker et al. (2012) have developed and collected data on specific life events which might have a significance in the onset of an AD – thus gathering a body of knowledge that will facilitate the specification of the diagnosis.

Table 1 Proposed diagnostic criteria for adjustment disorders (Maercker et al., 2007)

A Reactions to an identifiable stressor occurring within 1 month of the stressful event

B Intrusive symptoms/ruminations

1. Recurrent, distressing and involuntary recollections of the event
2. Repetitive thoughts or constant rumination about the event, occurring most days for at least 1 month
3. Stress if reminded

C Avoidance

1. Avoidance of stimuli associated with the event
2. Efforts to avoid thoughts associated with the event, usually in vain
3. Efforts to avoid feelings associated with the distressing event
4. Efforts to avoid talking about the event
5. Withdrawal from others

D Failure to adapt

1. Loss of interest in work, social life, care for others, leisure activities
2. Difficulty concentrating, trouble sleeping
3. Lack of self-confidence when engaging in familiar activities

Additional characteristics determining the subtype

- with depressed mood: the predominant manifestation involves symptoms of depressed mood
- with anxiety: the predominant manifestation involves symptoms of anxiety
- with disorders of impulse control: the rights of others are violated, e.g. by aggressive behaviour

A questionnaire based on the same theory has recently been constructed – Adjustment Disorder New Module (ADNM) (Einsle et al., 2010). While fairly new, this questionnaire has been the subject of several validation studies involving numerous clinical patient groups: cardiac patients with automatic implantable cardioverter defibrillators (Maercker et al., 2007), geriatric patients (Maercker et al., 2008), psychosomatic patients (Bley, Einsle, Maercker, Weidner, & Joraschky, 2008) and conflict refugees (Dobricki et al., 2010). The ADNM questionnaire was also used in a recent study aimed at finding out the prevalence of AD in a nationwide survey in Germany (Maercker et al., 2012). The questionnaire was originally constructed generating 55 statements corresponding to each of the core symptoms – this item pool was surveyed by a group of experts, resulting in 29 items in the final version of the questionnaire (incorporating three core symptom groups and subtypes of AD).

1.4 The Aim of the Current Study

The aim of the present study was to report the adaptation and the validation of the Estonian version of the ADNM questionnaire. The importance of adapting this new measuring instrument for the purpose of screening for ADs is that the diagnosis of this disorder is improved so that more targeted, appropriate therapy can be offered at an earlier stage. The reason for adapting and validating this particular questionnaire relies on the body of evidence that the ADNT is gaining increasing support in AD research, giving reliable evidence that the ADNM questionnaire would facilitate more accurate diagnosis and therefore treatment outcomes of AD. Research shows that inappropriately conceptualizing a patient's problem as an AD may result in delays or inaccuracies in treatment (Newcorn, Strain, & Mezzich, 2000). The hypotheses were therefore as follows:

Prior to commencing data collection for this study, a hypothesis was formulated stating that the ADNM questionnaire would validly discriminate the presence of AD from other psychiatric disorders.

1) The presence of AD according to the ADNM questionnaire is in partial concordance with psychiatric diagnoses.
2) In the case of the presence of AD according to the ADNM questionnaire, other symptoms should not be manifest to a degree that warrants categorization as a different disorder .

II Method

2. 1 Instruments

BDI (Beck, Rush, Shaw & Emery, 1979; Beck, Steer 1987, Estonian version by Kreegipuu, 1997) – Beck Depression Inventory is a 21-item instrument designed to assess the severity of Depression in adolescents and adults. Although the BDI was originally designed to assess the severity of Depression in psychiatrically diagnosed patients, it has been widely used for detecting the presence of depressive syndromes in normal populations (Beck & Steer, 1987). The BDI is scored by summing up the ratings given by the examinee for each of the 21 items. Each item is rated on a 4-point scale ranging from 0 to 3. The maximum score is 63. According to Beck and Steer (1987), the cut-off points based on the original validation of the test are: scores from 0 to 9, considered asymptomatic; scores of 10 to 18 indicate mild to moderate Depression; scores of 19 to 29 indicate moderate Depression and scores of 30 to 63 indicate extremely severe Depression. The authors of the test also point out that it is shown that test-retest stability may not be very useful because patients are expected to show reduction in Depression from both the effect of the therapeutic intervention and the passage of time. The Estonian version of the test has good reliability (Tasa, Pakk & Allik, 1990; Raava, 1993 as referred in Kreegipuu, 1997) and differential validity (Kreegipuu, 1996 as referred in Kreegipuu, 1997).

The PCL-C (PTSD Check List – Civilian) is a questionnaire currently still being adapted into Estonian. While the psychometric values of the questionnaire are not yet final, the results so far suggest that it is proving to be a reliable measurement method in assessing PTSD symptoms. There have been two studies aimed to assess the validity of this instrument. First study included Chernobyl war veterans living in Harjumaa and a control group from Harjumaa matching the veteran's age (using the Population Register and random sampling method). The number of participants was 471 (average age 55, SD=7 years). The 17 item-scale's Cronbach's alpha was 0.93. The PCL-C consists of three subscales – according to the initial validation study, the internal consistencies were as follows: Reliving (items 1-5) Cronbach's alpha 0.87; Avoidance (items 6-12) Cronbach's alpha 0.87; Arousal (items 13-17) Cronbach's alpha 0.84. As the overall scores of PCL-C correlate highly with the subscales of

EST-Q-2, PCL-C appears to have high convergence validity. In the second part of the validation process the PCL-C was validated comparing the scores of PCL-C and M.I.N.I 500. Researchers suggest the cut off point for showing the prevalence of PTSD to be ≥ 50 (out of 85). The questionnaire states 17 items to which the respondent is asked to evaluate each item on a scale of 1-5 from "1 – Not at all" to "5 – Very much" (unpublished data).

EST-Q-2 (Aluoja, Shlik, Vasar, Luuk, & Leinsalu, 1999) – Emotional State Questionnaire (EST-Q) is a 28-item self-report questionnaire. The items of the EST-Q-2 were derived from diagnostic criteria of DSM-IV and ICD-10. The EST-Q-2 has 5 subscales: Depression, Anxiety, Agoraphobia-Panic, Fatigue and Insomnia. It is instructed in the questionnaire that the respondent mark down the magnitude of intensity of which any of the listed items has occurred within the time period of the last month. The responses are given on a 5-point scale (from "0 – Not at all" to "4 – Constantly"). If the total score of the Depression subscale (items 1-8) is greater than 11, this indicates the presence of depression. If the total score for the Anxiety subscale (items 9-14) is greater than 11 this indicates the presence of anxiety. If the total score for the Panic and Agoraphobia subscale (items 15-19) is greater than 6 this indicates the presence of panic and agoraphobia. If the total score for the Fatigue subscale (items 22-25) is greater than 6 this indicates the presence of fatigue. If the total score for the Insomnia subscale (items 26-28) is greater than 5 this indicates the presence of insomnia.

GHQ-26 (Goldberg et al., 1997; Estonian version by Vilt, 1997) – General Health Questionnaire is a 26-item self-report questionnaire. GHQ-26 has 4 subscales: Suicidality; Social Dysfunctioning; Depression and Anxiety; Sleep Disorders and Loss of Energy. The subscales yield good internal consistency and significant correlations between the GHQ-26 Depression and Anxiety subscale measured by BDI – giving support to the validity of the measure (Vilt, 1997). It is instructed in the questionnaire to mark down within four options, the description that best describes how the respondent has been feeling over the past few weeks. The endorsement of an item is considered present if the answerer marks one of the last two options (0-0-1-1).

2. 2 ADNM Questionnaire Construction

The **ADNM** (Einsle et al., 2010) – (*Appendix 1*) Adjustment Disorder New Module questionnaire is based on a recent diagnostic proposal for ADs (Maercker et al., 2007). It is a 29-item self-report questionnaire. However, this paper uses an ADNM version that has 6 additional Estonia-specific items which, after collaborating with the original authors and Estonian mental health experts, were added to the end of the questionnaire. The questionnaire consists of two parts. Firstly, it starts with a 23 item list of potential stressful life events where a person marks down specific events he/she has endured in the past 2 years (specifying the duration of each event). Secondly, 35 statements where the respondent marks how severely the statement applies to them ("Not at all"; "Seldom"; "Sometimes"; "Often") and since when has this reaction occurred (">1 month"; "1 month – 6 months"; "6 months – 2 years"). The ADNM contains questions which have been divided into three categories of core symptoms (Intrusions – items 3, 5, 12, 21, 23; Avoidance – items 4, 9, 13, 15, 18, 22, 29; Failure to Adapt – items 2, 17, 19, 25, 27) and three categories representing DSM-IV subtypes (Depressive mood 1, 6, 8, 11, 26, 28; Anxiety 7, 10, 24; Impulse disturbance 14, 16, 20). Initial validation research showed internal consistencies of the subscales as follows: α = of 0.85 for Intrusion, 0.80 for Avoidance, 0.79 for Failure to Adapt, 0.80 for Depressed mood, 0.83 for Anxiety and 0.88 for Impulse Disturbance. The majority or 2/3 of the symptoms in the core symptoms group have to be present for that symptom group to be manifested. If only core symptoms are present but no subtype, the case is assigned to be of an unspecified subtype. A subtype is present when all items allocated for a given subtype are rated "sometimes" or "often".

2. 3 Translation Procedure

The translation of the original questionnaire was performed by German philologist Anne Laur. As a result of discussing the items of the questionnaire with a number of Estonian Mental Health experts, 6 additional items were added to the end of the questionnaire (items 30-35). A pilot study with 5 people was conducted to evaluate the face validity of the items of the questionnaire. After editing the translation and modifying the questionnaire to better facilitate cross-cultural comparisons between the German and the English version of the test, a back translation was conducted by German philologist Maire Aigro (Estonian Association of Translators and

Interpreters). The back-translation was then sent to the original authors of the test and Professor Andreas Maercker confirmed the face validity of the added items and accuracy of the translation (personal communication).

2.4 Participants and Recruitment Method

The sample of this study (n=46) consisted of military conscripts (n=29), prisoners (n=3) and Psychiatric hospital patients (n= 14). Research consent was gained under consent number 218T-17 by the Research Ethics Committee of the University of Tartu. The military conscripts were from four Land Forces Battalions and one Naval unit from the Estonian Defence Forces, and psychiatric patients from Viljandi hospital and Tallinn Psychiatric hospital outpatient clinic. The 3 prisoners were from Tartu Prison.

All subjects with the suspicion of AD (i.e a conscript who had been appointed for a psychiatric evaluation or a prisoner who sought psychological help, or a patient in a psychiatric facility) completed a package of 5 self-report questionnaires. This package included the ADNM questionnaire, BDI, PCL-C, EST-Q-2 and GHQ-26 tests. After completion, the participants were evaluated in a psychiatric hospital and received their diagnoses – taking comorbidities into account, the 46 participants received 27 different combinations of diagnoses. Subjects were split into four groups: Psych-AD (AD based on psychiatric diagnosis), Psych-other (other diagnoses based on psychiatric diagnosis), ADNM-AD (AD according to the ADNM questionnaire), ADNM-nonAD (does not meet criteria of AD according to the ADNM questionnaire). The sample consisted of 41 males (89.1%) and 5 females (10.9%). The mean age was 23.3 (SD = 5.3) and mean time to administration of the study questionnaires was 62.5 (SD = 62.8) days.

The majority of participants (n=33, 71.8%) had either primary (n=9, 19.6%), secondary (n=12, 26.1%) or vocational school (n=12, 26.1%) education. The remaining participants (n=13, 28.2%) were either currently at university (n=6, 13%), had higher education (n=5, 10.9%) had an unfinished higher education (n=1, 2.2%), or had a Technical school (n=1, 2.2%) education.

Of the 46 participants 21 (45.7%) had sought earlier psychiatric help.

2.5 Data analysis

Data was stored anonymously and statistical analyses were carried out using SPSS

Version 20.0 and R version 3.1.0. Cronbach's alpha was calculated to examine the internal consistency of the ADNM questionnaire. Fisher's exact test was used to find statistical significance between the ADNM questionnaire and other measuring instruments. Correlations between the subscales were examined using a 2-tailed non parametric crosstab. Logistic regression was carried out to find predictive qualities of the measuring instruments. Confirmatory factor analysis was used to test different hypothetical models of the data. As a basis for the statistical tests, a statistical significance (p) value of 0.05 was employed.

III Results

Diagnoses

Three (6.5%) subjects met the criteria for diagnosis of AD according to the ADNM questionnaire (ADNM-AD group), all of whom had a mixed subtype. Based on the psychiatric evaluation, 37 (80.4%) patients were given a diagnosis of AD (Psych-AD group) and 9 (19.6%) patients received another diagnosis (Psych-other group). The three participants exceeding the threshold of the ADNM questionnaire were all from the Psych-AD group (patient 1: F43.22 AD with mixed anxiety and depressive reaction & Z63.0 Problems in relationship with spouse or partner, patient 2: F43.23 AD with predominant disturbance of other emotion, patient 3: F43.22 AD with mixed anxiety and depressive reaction).

Stressor events

The most common stressor event subjects indicated in the ADNM questionnaire was "*ajateenistus*" [conscription to the army] (n=31, 72.1%), "*vangla*" [imprisonment] (n=3, 7.0%), "*konfliktid perekonnas*" [conflicts in the family] (n=2, 4.7%), and "*lähedase surm*" [death of a loved one] (n=2, 4.7%). The remaining stressors were "*lähedase sõbra surm*" [death of a close friend], *"rahalised probleemid"* [monetary issues], "*konfliktid suhetes*" [conflicts in relationships], "*elukaaslane töötab välismaal*" [spouse working abroad] and "*tüdruksõbra abort*" [girlfriend's abortion] (n=1, 2.2% each respectively).

Questionnaires

In the EST-Q-2 questionnaire 30 (65.2%) participants exceeded the Anxiety subscale threshold, 10 (21.7%) the Panic, 38 (84.6%) the Fatigue, 36 (78.3%) the Insomnia and 35 (76.1%) the Depression subscale threshold. The PCL questionnaire indicated that 18 (39.1%) patients exceeded the threshold for the presence of PTSD. According to the BDI questionnaire results, the majority of patients (n=22, 47.8%) fell into the moderate/severe Depression range, 9 participants (19.6%) into the mild/moderate and 9 participants (19.6%) into the severe Depression range of the scale (*Figure 1*).

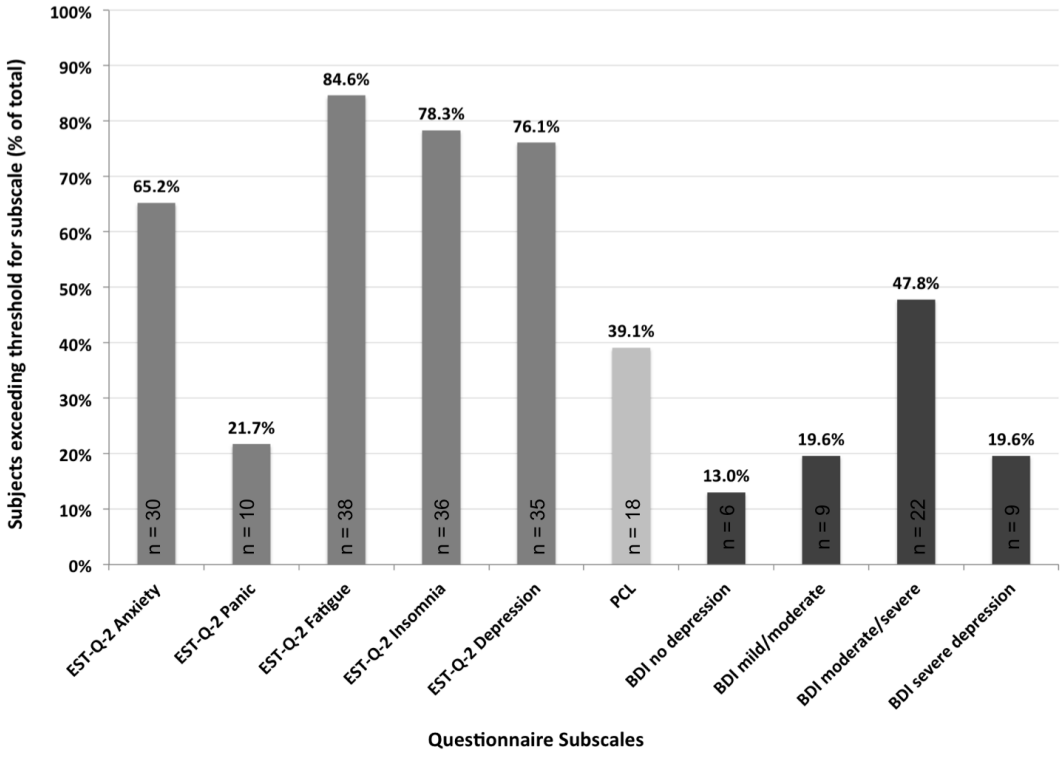

Figure 1 Subjects exceeding the thresholds for EST-Q-2 subscales and PCL

Reliability of the subscales of the measuring instruments

In this study, the psychometric properties of the BDI showed an internal consistency of 0.85. The PCL-C subscales showed an overall Cronbach's $\alpha = 0.91$. Specifically 0.87 for the Reliving subscale, 0.84 for the Avoidance subscale, 0.75 for the Arousal subscale. EST-Q-2 internal consistencies of the subscales were as follows: Depression subscale $\alpha = 0.85$, Anxiety subscale $\alpha = 0.84$, Panic and Agoraphobia subscale $\alpha = 0.69$, Fatigue subscale $\alpha = 0.84$, Insomnia subscale $\alpha = 0.84$. GHQ-26 subscales showed a Cronbach's $\alpha = 0.95$ for the Depression and Anxiety subscale, $\alpha = 0.9$ for

the Insomnia and Energy Loss subscale, $\alpha = 0.85$ for Social Dysfunction and $\alpha = 0.79$ for the suicidality subscale.

Reliability of the ADNM questionnaire

The internal consistency of the ADNM questionnaire was calculated using Cronbach's α. From the core symptoms categories, intrusions subscale $\alpha = 0.83$, and avoidance subscale $\alpha = 0.76$ – neither of these subscales showed improvement in the internal consistency if an item had been deleted. However, the Failure to Adapt subscale $\alpha = 0.53$. Subsequently, additional items were added into the category (items 30-35: 30 – *Stressi tekitava sündmuse järel ei suuda ma enam oma käitumist kontrollida* [Ever since the stressful event, I can't control my behavior]; 31 – *Stressi tekitavast sündmusest alates olen siiani šokis* [Ever since the stressful event, I am still in shock]; 32 – *Mu söögiisu on muutunud* [My appetite has changed]; 33 – *Alates stressi tekitanud olukorrast olen hakanud rohkem alkoholi tarbima või suitsetama* [Ever since the stressful event I have started drinking more alcohol or smoking more]; 34 – *Viimasel ajal väsinud oluliselt kiiremini kui varem* [Lately I get tired a lot quicker than usual]; 35 – *Tunnen, et mu füüsiline tervis on halvenenud (peavalud, lihaspinged* [My physical well-being has worsened (headaches, muscle tension]). After deleting item 33 $\alpha = 0.71$, after deleting item 27 (*Stressi tekitavast olukorrast saadik ei saa ma enam õieti magada* [Since the stressful situation, I can no longer sleep properly]) $\alpha = 0.72$, after deleting item 2 (*Teised inimesed ütlevad mulle, et stressi tekitav olukord on mind muutnud* [Other people have told me that I have changed a lot since the stressful situation]) $\alpha = 0.721$, after deleting item 32 $\alpha = 0.73$. It is therefore suggested to use the new Failure to Adapt subscale where the endorsement of 5 items out of 7 would indicate the presence of the category. For subscale categories, depressive mood subscale $\alpha = 0.71$, anxiety subscale $\alpha = 0.73$, impulse disturbance $\alpha = 0.85$ (*Figure 2*).

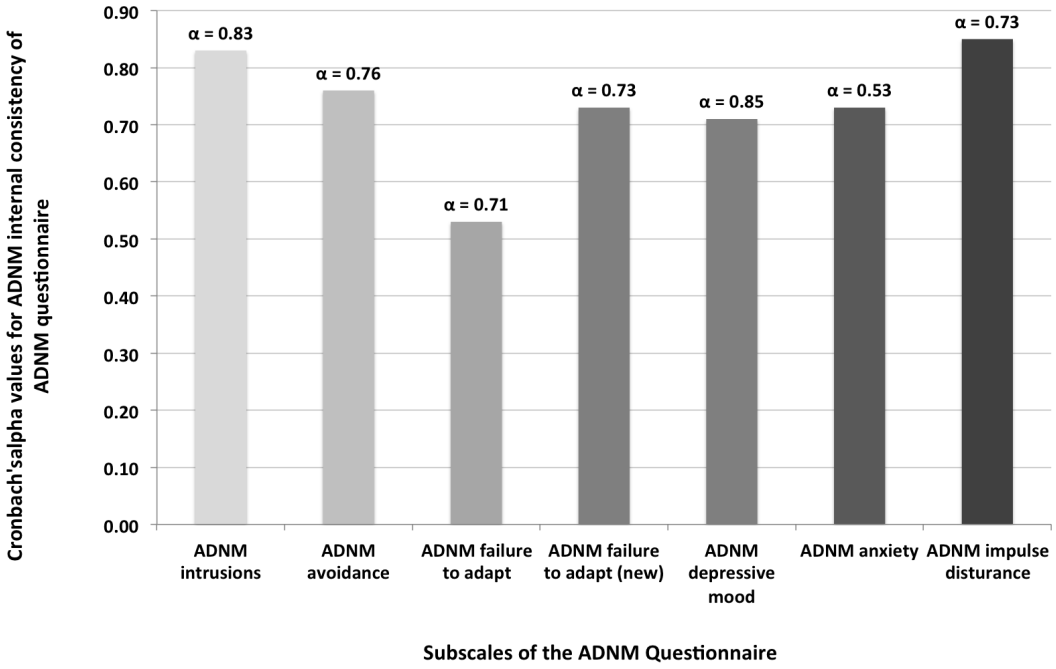

Figure 2 Reliability of the ADNM questionnaire subscales

Crosstabs

Fisher's exact test was performed to look for significant relations between questionnaire subscales. Fisher's exact test is a test used commonly for small sample sizes to assess the chi-square and significance of crosstabs analysis results (Andres & Tejedor 1995).

The results showed statistically significant relationships between the presence of AD according to the ADNM questionnaire and the EST-Q-2 panic and agoraphobia subscale ($\chi 2 = 15.40$; $p < 0.05$), and the social dysfunction subscale of the GHQ-26 ($\chi 2 = 9.36$; $p < 0.05$) and the suicidality subscale of the GHQ-26 ($\chi 2 = 9.02$; $p < 0.05$).

Correlations

The correlations between the subscales of the ADNM questionnaire and subscales of other instruments are presented in Table 2.

Table 2 Intercorrelations of ADNM subscales and correlations with other instruments

Intercorrelations	ADNM intrusion/ rumination	ADNM avoidance	ADNM failure to adapt	ADNM failure to adapt (new)	ADNM depressed mood subtype	ADNM anxiety subtype	ADNM impulse subtype
ADNM intrusion/rumination	1.00	0.85**	0.81**	0.67**	0.73**	0.87**	0.70**
ADNM avoidance	0.85**	1.00	0.74**	0.61**	0.78**	0.77**	0.69**
ADNM failure to adapt	0.81**	0.74**	1.00	0.80**	0.76**	0.77**	0.65**
ADNM failure to adapt (new)	0.67**	0.61**	0.80**	1.00	0.70**	0.59**	0.58**
ADNM depressed mood subtype	0.73**	0.78**	0.76**	0.70**	1.00	0.67**	0.62**
ADNM anxiety subtype	0.87**	0.77**	0.77**	0.59**	0.67**	1.00	0.65**
ADNM impulse subtype	0.70**	0.69**	0.65**	0.58**	0.62**	0.65**	1.00
EST-Q-2 depression	0.21	0.13	0.16	0.39*	0.25	0.16	0.03
EST-Q-2 general anxiety	0.12	0.07	0.22	0.28	0.19	0.29	0.04
EST-Q-2 panic and agoraphobia	0.10	0.13	0.14	0.08	0.06	0.30	-0.04
EST-Q-2 fatigue	0.31*	0.20	0.19	0.33*	0.20	0.12	0.21
EST-Q-2 insomnnia	0.17	0.02	0.13	0.17	0.22	0.12	0.20
BDI	0.16	0.09	0.03	0.22	0.06	0.16	0.03
PCL reliving	-0.02	0.09	0.00	0.02	0.05	0.06	-0.06
PCL avoidance	0.18	0.26	0.10	0.17	0.08	0.19	0.04
PCL arousal	0.08	0.06	0.10	0.24	0.13	0.19	-0.02
PCL overall	0.10	0.15	0.04	0.17	0.08	0.16	0.00
GHQ depression/anxiety	0.08	0.05	0.12	0.22	0.13	0.21	-0.06
GHQ insomnia	0.11	0.04	0.20	0.13	0.24	0.20	0.13
GHQ social dysfunction	0.14	-0.01	0.22	0.08	0.09	0.20	0.07
GHQ suicidality	0.28	0.21	0.01	0.27	0.26	0.26	0.10

* = correlation is significant at the 0.05 level (2-tailed). ** = correlation is significant at the 0.01 level (2 tailed).

Correlation analysis (using Spearman rho) results show that each of the subscales of the ADNM questionnaire is significantly correlated with the rest of the subscales of the ADNM questionnaire. Additionally, the Failure to Adapt (new) subscale (items 17, 10, 25, 30, 31, 34, 35) of the ADNM questionnaire has significant correlation with EST-Q-2 Depression and EST-Q-2 Fatigue subscales. The Intrusions subscale of the ADNM questionnaire has significant correlation with the Fatigue subscale of the EST-Q-2.

Logistic regression

After running a logistic regression analysis, with the dependent variable of AD presence according to the ADNM questionnaire, BDI, PCL, EST-Q-2 subscales or GHQ subscales did not significantly predict the caseness of AD according to the ADNM.

For the Psych-other group, the mean for the ADNM questionnaire Intrusions subscale was 1.00 (ST = 2.0), for Avoidance 1.11 (ST = 2.08), for Failure to Adapt 1.11 (ST = 1.70), for Failure to Adapt (new) 1.11 (ST = 1.83), for the Depressive mood 1.00 (ST

= 1.41), for Anxiety 0.56 (ST = 1.13), for Impulse disturbance 0.44 (ST = 1.01) and for the presence of AD according to the ADNM questionnaire 0.00 (ST = 0.00).

For the Psych-AD group, the mean for the ADNM questionnaire Intrusions subscale was 1.47 (ST = 1.67), for Avoidance 1.11 (ST = 1.71), for Failure to Adapt 1.25 (ST = 1.54), for Failure to Adapt (new) 1.62 (ST = 1.77), for the Depressive mood 1.29 (ST = 1.74), for Anxiety 1.00 (ST = 1.16) and for Impulse disturbance 1.06 (ST = ST = 1.30).

Logistic regression analysis with the dependent variable of psychiatric diagnosis (Psych-AD group and Psych-other group) did not obtain any significant results when conducted with the subscales of the ADNM questionnaire as predictors.

Logistic regression analysis with the dependent variable of AD psychiatric diagnosis and all other subscales of the remaining questionnaires as predictors indicated that EST-Q-2 Fatigue subscale (OR = 2.60, $p < 0.05$) and GHQ-26 insomnia subscale (OR = 4.11, $p < 0.05$) scores increased the risk of psychiatric diagnosis of AD.

Confirmatory Factor Analysis (CFA)

In order to assess the construct validity of the ADNM questionnaire, a confirmatory factor analysis was run on the subscales of the ADNM questionnaire.

Based on the theory of the ADNM, the questionnaire items are divided into 6 factors – CFA was carried out in order to evaluate the model fit. As the Failure to Adapt core symptoms category had a higher internal consistency with the modified items list, the fit of both models (the original version of that category as well as the new proposed category) was tested in CFA. Both of the fitted factor models were statistically significantly different from the data of this study ($p<0.05$). The proposed factor structure did not confirm.

IV Discussion

The aim of this study was to examine the psychometric properties of the Estonian version of the ADNM questionnaire designed to screen for the presence of AD according to a new concept of AD developed by Maercker et al. (2007).

4.1 Psychometric properties of the ADNM questionnaire

While the dominant part of the sample of this study had been diagnosed with AD,

there were a number of other diagnoses. This corroborates with the first hypothesis of the study – results show that the presence of AD according to the ADNM questionnaire is in partial concordance with psychiatric diagnoses. As only a small number of the entire sample exceeded the ADNM questionnaire threshold, this gives ground to debate whether the thresholds for the ADNM questionnaire are particularly high. One possible interpretation of this result is that the ADNM questionnaire intentionally aims to screen only for severe AD cases and therefore avoid subclinical cases to appear as possible disorder manifestations.

An unexpected result showed that none of the ADNM questionnaire core symptoms subscales had significant correlations with the symptoms corresponding constructs – this is particularly noteworthy because the ADNT builds on the concept of PTSD. What is more, the subtypes (Depressive mood; Anxiety; Impulse Disturbance) did not show significant correlations with the respective scales of other instruments either. Therefore, the proof for construct validity is poor. The construct of the ADNM questionnaire was also examined by confirmatory factor analysis. Based on the sample group of this study, the proposed six subscales of the questionnaire did not confirm. These results raise to question whether the ADNT is not transferred well enough into the ADNM questionnaire or the Estonian version of the ADNM is not in concurrence with the original model. The findings of this study show that the subscales of the ADNM correlate highly with each other – this gives ground to believe that the 6 factoral construct of the model might not be well established. ADNT states that AD should not be confused with Depression or Anxiety Disorders (Maecker et al., 2007). However, it is questionable how the ADNM delineates between the “old” excisting criterium and the “new” proposed criterium of AD – it aims to show AD is a different diagnostic criterium from Depression and Anxiety and more alike with stress reactions such as PTSD, but results of this study do not show a clear distinction between those disorders.

Content validity of the ADNM questionnaire was assessed consulting with Estonian mental health experts, who were asked to generate new questionnaire items, based on symptoms they frequently come across in their clinical practice. Results of this study show that the new added items proved to be justified and also improved the overall internal consistency of the questionnaire. Except for one core symptoms subscales, the internal consistency of the scales of the ADNM was good. This proved the internal reliability of the subscales both for the core symptoms as well as the DSM-IV

based subtype categories. However, while 2 of the 3 core symptoms categories, namely Intrusions and Avoidance subscales, showed a high internal consistency, the category of Failure to Adapt showed a mediocre consistency. The internal consistency was improved by replacing items which did not fit well into the category with the new Estonia-specific items. The decision to add these items to the Failure to Adapt category was made based on the applicability of these new items to the theoretical background of the Failure to Adapt symptoms category – this cluster of symptoms reflects the behavioural and personality changes relative to the stressor. After replacing the items and adding new ones, the internal consistency improved noticably. This compares well with the original development of the questionnaire, where the Failure to Adapt subscale was the one with the weakest internal consistency and needed items erased (Maercker et al., 2007).

With regard to construct validity, the results of the correlation analysis did not show significant correlations with scores on tests of related constructs. The construct of the ADNM questionnaire was examined using a confirmatory factor analysis – based on the sample group of this study, the proposed six subscales of the questionnaire did not confirm. These results lead to question whether the ADNT is not passed on clearly in the ADNM questionnaire or if the theory of three core symptoms groups and three subtype groups is not defined validly. Concurrent validity of the ADNM questionnaire was weak.

The core symptoms categories yielded more statistically significant correlations – namely that the Intrusions category had a significant correlation with the EST-Q-2 Fatigue subscale and the Failure to Adapt (new) category had two significant correlations – one EST-Q-2 Fatigue category and another with EST-Q-2 Depression category. This finding is particularly important since the Failure to Adapt (new) core symptoms category is the subscale where Estonia specific items were added. One possible interpretation is that the added items represent the concept of AD in Estonia's clinical practice. It could therefore be concluded that Estonian specialists consider AD is largely related with depression and fatigue – two of the added items relate to these subscales well: getting tired more quickly and having problems with physical health (headaches, muscle tension). This leads to question whether the criterium for AD is indeed vague to the point where every country's mental health experts seems to define and diagnose AD differently?

The results obtained from the logistic regression analysis did not show that the ADNM questionnaire predicts AD caseness according to psychiatric diagnosis. However, evaluating the rest of the scales gave a result that the higher a subject's score on the EST-Q-2 Fatigue subscale and on the GHQ-26 Insomnia subscale, the bigger the chance that the person fits in the AD group of psychiatric diagnoses. This shows that the ADNM questionnaire does not predict current AD according to psychiatric diagnosis. This result is in concordance with the proposal that Estonian psychiatrists may tend to consider fatigue, lack of rest and bad sleep among symptoms which might result in AD diagnosis – thus providing evidence that the diagnosing of AD in Estonia does not appear to link AD together with PTSD or ASD.

4.2 Explanations of the results

Crosstabs analysis showed that participants with higher scores on the Suicidality or Social Dysfunction scales of the GHQ-26 questionnaires or the Panic and Agoraphobia scale of the EST-Q-2 are significantly more likely to have AD according to the ADNM questionnaire. This finding is interesting since it gives further empirical evidence to the notion that AD is related to a heightened risk of suicidality – this goes to prove that AD is not merely a state of distress but has a significant threat to the sufferer's life (Pelkonen et al., 2007). This result also compares well with the study of Kryzhanovskaya and Canteburry (2001) whose findings show that AD is associated with suicidality, involuntary hospitalization and substance abuse. The significant relationship between the presence of AD according to the ADNM and high suicidality are also in line with the assumption that the ADNM questionnaire aims to be a rather strict measuring instrument, cautioning clinicians to consider AD as a serious reaction to stress (Einsle et al. 2010).

The most common stressful life events noted in the study may be due to the peculiarities of this sample group – as the majority of the sample were conscripts and prisoners, the main stressor mentioned was "conscription to the army" and "imprisonment". It is interesting to note that other specified stressors were to do with bereavement. Giving ground to much debate, the release of the DSM-5 encompasses a new diagnostic entity of bereavement – it is argued that this would pathologize a normal human reaction (Zisook et al., 2012; Wakefield, 2012). As the subjects of this study who had indicated grief as a stressor went on to receive a diagnosis of AD, this goes to show the close link between grief as a stress reaction and the development of

AD. These findings are in support of the idea of the original authors (Maercker et al., 2007) who suggest that grief should be grouped together with the diagnostic concept of AD.

The second hypothesis of the study stated that in the case of the presence of AD according to the ADNM questionnaire, other disorders should not be manifested. This hypothesis was rejected. The majority of the participants exceeded the EST-Q-2 Fatigue and Insomnia subscale thresholds, and according to the BDI, Depression ranged mostly in the moderate/severe range and equally as many participants fell in both mild/moderate and severe range. These findings are similar to that of previous research trying to distinguish AD from other similar diagnoses. Casey et al. (2006) aimed to distinguish between depressive episode and AD based on 8862 subjects from the Outcomes of Depression International Network (ODIN) study – results showed that there were no variables which would independently distinguish AD from either mild or moderate depressive episode. According to the PCL-C, nearly half of the participants exceed the PTSD manifestation level. It is important to bear in mind that the PCL-C questionnaire is not yet a fully validated diagnostic tool, therefore caution should be applied in viewing the result for the prevalence of PTSD according to the PCL-C.

Currently, if two disorders overlap, AD would not be diagnosed. However, if ADNT did indeed serve as a new diagnostic entity for AD, this would mean it became a separate diagnosis and a patient could have a comorbidity of AD and another Axis I disorder. This possibility of AD comorbidity could explain the results of this study: all of the participants exceeding the AD threshold according to the ADNM questionnaire have also scored high on instruments measuring Depression, Anxiety and PTSD. However, the presence of Depression and Anxiety might also be due to poor discriminant validity of the ADNM questionnaire.

4.3 Future Outlook and limitations of the study

The results of this paper need to be interpreted with caution because there were important limitations to the study. Future work should aim to gather data from a larger sample size, but also include a comparable non-clinical control group. It was assumed in this study that the data gathered from participants would result in two sample groups – clinical group with a psychiatric diagnosis and control group with no psychiatric diagnosis. However, as all of the subjects ended up being diagnosed with a

psychiatric disorder, the sample was divided into two groups based on either having an AD or another diagnosis, with the latter group serving as a control group. The results of the confirmatory factor analysis are inconclusive because the sample size is too small. In order to obtain more reliable results, a larger sample size is needed – further research using exploratory factor analysis might be beneficial to discover alternative structure models.

V Conclusion

The results of this study bring further evidence that AD as a psychiatric disorder is not well defined – despite a body of evidence that AD is not merely a state of distress but is found to be assosciated with a heightened risk of suicidality, there is still no clear construct of what exactly constitutes this disorder. The first hypothesis of the study was confirmed – the presence of AD according to the ADNM was in partial concordance with psychiatric diagnoses. However, the second hypothesis was rejected – findings of this study show that participants who exceeded the ADNM threshold, also exceeded thresholds for measuring scales for other disorders. The ADNT theory leaves many questions for future research – as this is a theory aimed to differentiate better between AD and other related disorders, basing on the current study, it fails to draw clear differences between AD and other constructs measured.

References

Aluoja, A., Shlik, J., Vasar, V., Luuk, K., Leinsalu, M. (1999). Development and psychometric properties of the Emotional State Questionnaire, a self-report questionnaire for Depression and anxiety. *Nordic Journal of Psychiatry*, 53, 443-449.

Andres, A.M., Tejedor, I.H. (1995). Is Fisher's exact test very conservative? *Computational Statistics & Data Analysis*, 19 (5), 579-591.

American Psychiatric Association (2000). Diagnostic and statistical manual of mental disorders – Text revision. Washington, DC: APA.

Beck, A.T., Steer, R.A. (1987). Beck Depression Inventory: Manual. The Psychological Corporation Harcourt Brace Jovanovich, Inc. USA.

Bley, S., Einsle, F., Maercker, A., Weidner, K., Joraschky, P. (2008). Evaluation of a New Concept for Diagnosing Adjustment Disorders in a Psychosomatic Setting. *Psychotherapie Psychosomatik Medizinische Psychologie,* 58 (12), 446-453.

Boelen, P.A., Prigerson, H.G. (2012). Commentary on the Inclusion of Persistent Complex Bereavement-Related Disorder in DSM-5. *Death Studies*, 36 (9), 771-794.

Bolu, A., Doruk, A., Ak, M., Özdemir, B., Özgen, F. (2012). Suicidal Behaviour in Adjustment Disorder Patients. *The Joumal of Psychiatry and Neurological Sciences*, 25 (1), 58-62.

Brewin, C.R., Holmes, E.A. (2003). Psychological theories of posttraumatic stress disorder, *Clinical Psychology Review,* 23 (3), 339-376.

Bryant, R.A., Friedman, M.J., Spiegel, D., Ursano, R., Strain, J. (2011). A Review of Acute Stress Disorder in DSM-5. *Depression and Anxiety*, 28 (9), 802-818.

Casey, P. (2009). Adjustment disorder: epidemiology, diagnosis and treatment. *CNS Drugs*, 23(11), 927-938.

Casey, P., Bailey, S. (2011) Adjustment disorders: the state of the art. *World Psychiatry*, 10 (1), 11 – 18.

Casey, P., Doherty, A. (2012). Adjustment disorder: implications for ICD-11 and DSM-5. *The British Journal of Psychiatry*, 201 (2), 90-92

Casey, P., Dowrick, C., Wilkinson, G. (2001). Adjustment disorders: fault line in the psychiatric glossary. *The British Journal of Psychiatry,* 179 (6), 479 – 481.

Casey, P., Maracy, M., Kelly, B. D., Lehtinen, V., Ayuso-Mateos, J. L., Dalgard, O. S., Dowrick, C. (2006) Can adjustment disorder and depressive episode be distinguished? Results from ODIN. *Journal of Affective Disorders,* 92 (2), 291 – 297.

Chan. S., Hadjistavropoulos, T., Carleton, R.N., Hadjistavropoulos, H. (2012). Predicting Adjustment to Chronic Pain in Older Adults. *Canadian Journal of Behavioural Science*, 44 (3), 192–199.

Dobricki, M., Komproe, I. H., de Jong, J. T. V. M., Maercker, A. (2010). Adjustment disorders after severe life-events in four postconflict settings. *Social Psychiatry and Psychiatric Epidemiology,* 45 (1), 39 – 46.

Ehlers, A., Clark, D.M. (2000). A cognitive model of posttraumatic stress disorder. Behaviour Research and Therapy, 38 (4), 319-345.

Einsle, F., Köllner, V., Dannemann, S., Maercker, A. (2010) Development and validation of a self-report for the assessment of adjustment disorders. *Psychology, Health & Medicine,* 15 (5), 584 – 595.

Fernandez A., Mendive J.M., Salvador-Carulla L., Rubio-Valera M., Luciano J.V, Pinto-Meza A. (2012). Adjustment disorders in primary care: prevalence, recognition and use of services. *The British Journal of Psychiatry*, 201 (2) 137–42.

Fielden, J-S. (2012). Review: Management of Adjustment Disorder in the Deployed Setting. *Military Medicine*, 177 (9), 1022-1027.

Friedman, M.J., Resick, P.A., Bryant, R.A., Strain, J., Horowitz, M., Spiegel, D. (2011). Classification of Trauma and Stressor-Related Disorders in DSM-5. *Depression and Anxiety*, 28 (9), 737-749.

Foa, E. (2011). Prolonged exposure therapy: past, present, and future. *Depression and Anxiety*, 28 (12), 1043-1047.

Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., Rutter, C. (1997) The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psychological Medicine, 27 (1), 191 – 197.

Hansen-Schwartz, J., Kijne, B., Johnsen, A., Andersen, H. S. (2005) The course of adjustment disorder in Danish male conscripts. *Nordic Journal of Psychiatry*, 59 (3), 193 – 197.

Horowitz, M.J. (2004). Stress response syndromes: PTSD, grief and adjustment disorders, 4th ed. Northvale NJ: Aronson.

Israelashvili, M. (2012). Should adjustment disorder be conceptualized as transitional disorder? In pursuit of adjustment disorders definition. *Journal of Mental Health*, 21(6), 579–588.

Jeong, HG., Ko, YH., Han, C., Kim, YK., Joe, SH. (2013). Distinguishing Quantitative Electroencephalogram Findings between Adjustment Disorder and Major Depressive Disorder. *Psychiatry Investigation*, 10 (1), 62-68.

Juursoo, M. (2011). Psüühikahäire tõttu ajateenistusest vabastamine: psühhomeetriliste testidega leitud prediktorid. Magistritöö, Tartu: Tartu Ülikool. *(Discharge due to a mental disorder during conscript-service: predictors found by psychometric tests. Master's Thesis, Tartu, University of Tartu).*

Kaplow, J.B., Layne, C.M., Pynoos, R.S., Cohen, J.A., Lieberman, A. (2012). DSM-5 Diagnostic Criteria for Bereavement- Related Disorders in Children and Adolescents: Developmental Considerations. *Psychiatry*, 75(3), 243-266.

Kreegipuu, M. Negatiivsete kognitsioonide seos emotsionaalsete häiretega. In: Rosendahl, W., Hennig, H., Saarma, M. (1997) Entwicklungen und Tendenzen in der Medizinischen Psychologie – ein Leitfaden. Arengusuundi meditsiinipsühholoogias. Pabst Science Publishers, USA.

Kreegipuu, M. Esop, K-E. (1996). Reflection of thought content and process in dysfunctional attitudes measures. Abstract, 26th Congress of European ABCT, Budapest, Oct 2.-5., 1996.

Kryzhanovskaya, L., Canterbury, R. (2001) Suicidal behavior in patients with adjustment disorders. *Crisis*, 22 (3), 125 – 131.

Lindqvist, D., Träskman-Bendz, L., Vang, F. (2008) Suicidal intent and the HPA-axis characteristics of suicide attempters with major depressive disorder and adjustment disorders. *Archives of Suicide Research,* 12 (3), 197 – 207.

Lung F.W., Lee, T.H., Huang, M.F. (2012). Parental bonding in males with adjustment disorder and hyperventilation syndrome. *BMC Psychiatry*, 12 (56).

Maercker, A., Einsle, F., Köllner, V. (2007) Adjustment Disorder as Response Syndromes: A New Diagnostic Concept and Its Exploration in a Medical Sample. *Psychopathology;* 40: 135-146.

Maercker, A., Forstmeier, S., Enzler, A., Krüsi, G., Hörler, E., Maier, C., Ehlert, U. (2008) Adjustment disorders, posttraumatic stress disorder and depressive disorders in old age: findings from a community survey. *Comprehensive Psychiatry*, 49 (2), 113 –120.

Maercker, A., Forstmeier, S., Pielmaier, L., Spangenberg, L., Brähler, E., Glaesmer, H. (2012). Adjustment disorders: prevalence in a representative nationwide survey in Germany. *Social Psychiatry and Psychiatric Epidemiology,* 47 (11), 1745-1752.

Mitchell, A.J., Chan, M., Bhatti, H., Halton, M., Grassi, L., Johansen, C., Meader, N. (2011). Prevalence of Depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. *The Lancet Oncology*, 12 (2), 160–174.

Na, K-S., Oh, S-J., Jung, H-J., Lee, S-I., Kim, Y-K., Han, C., Ko, Y-H., Paik, J-W., Kim, S.G. (2013). Alexithymia and low cooperativeness are associated with suicide attempts in male military personnel with adjustment disorder: A case–control study. *Psychiatry Research*, 205, (3), 220–226.

Newcorn, J.H., Strain, J.J., Mezzich J.E. Chapter 23: Adjustment Disorders. In: Kaplan, H.I., Sadock, B.J., Sadock, V.A. (2000). Comprehensive Textbook of Psychiatry, vol II. 7th ed. Lippincott Williams & Wilkins, USA.

Niebuhr, D. W., Powers, T. E., Krauss, M. R., Cuda, A. S., Johnson, B. M. (2006) A review of initial entry training discharges at Fort Leonard Wood, MO, for accuracy of discharge classification type: fiscal year 2003. *Military Medicine*, 171 (11), 1142 –1146.

Pelkonen, M., Marttunen, M., Henriksson, M., Lönnqvist, J. (2007) Adolescent adjustment disorder: precipitant stressors and distress symptoms of 89 outpatients. *European Psychiatry*, 22 (5), 288 – 295.

Perera, H., Suvendraan, T., Mariestella, A. (2004) Profile of psychiatric disorders in the Sri Lanka Air Force and the outcome at 6 months. *Military Medicine*, 169 (5), 396 – 399.

Portzky, G., Audenaert, K., & van Heeringen, K. (2005). Suicide among adolescents A psychological autopsy study of psychiatric, psychosocial and personality-related risk factors. *Social Psychiatry & Psychiatric Epidemiology*, 40 (11) 922-930.

Semprini, F., Fava, G. A., Sonino, N. (2010). The spectrum of adjustment disorders:

too broad to be clinically helpful. *CNS Spectrums,* 15 (6), 382 – 388.

Shear, M. K., Simon, N., Wall, M., Zisook, S., Neimeyer, R., Duan, N., Reynolds, C., Lebowitz, B., Sung, S., Nakajima, S., Konishi, T., Konishi, T , Meert, K, Schiff, M, O'Connor, M.F., First, M., Sareen, J., Bolton, J., Skritskaya, N., Mancini, A. D., Keshaviah, A. (2011). Complicated Grief and Related Bereavement Issues for DSM-5. *Depression and Anxiety*, 28 (2), 103-117

Strain, J. J., Friedman, M. J. (2011) Considering adjustment disorders as stress response syndromes for DSM-5. *Depression and Anxiety,* 28 (9), 818-823.

Tasa, E., Pakk, H., Allik, J. (1990). EPL Projekt. Tartu, EPL / Fontes.

Vilt, A. (1997) Psühholoogilise häirituse uurimine kehalise haigusega inimeste seas Üldise Terviseküsimustiku abil. Lõputöö, Tartu: Tartu Ülikool.

Wakefield, J.C. (2012). DSM-5: proposed changes to depressive disorders. *Current Medical Research & Opinion,* 28 (3), 335–343.

WHO (1992). The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva: WHO-press.

Zaiontz, C., Arduini, A., Buren, D., Fungi, G. (2012). Migration Fluxes and Adjustment Disorder: an Examination of a Native English Speaking Population in Milan. *Journal of Social, Evolutionary and Cultural Psychology*, 6 (1), 66-81.

Zisook, S., Corruble, E., Duan, N.H., Iglewicz, A., Karam, E.G., Lanouette, N., Lebowitz, B., Pies, R., Reynolds, C., Seay, K., Shear, M.K., Simon, N., Young, I.T. (2012). The Bereavement Exclusion and DSM-5. *Depression and Anxiety*, 29 (7), 665-665.

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Appendix A

ADNM küsimustik

Adjustment Disorder – New Module (kohanemishäire uus mudel)

Küsimustik kohanemishäire diagnoosimiseks

Allolevas nimekirjas on loetletud raskeid sündmusi ja olukordi. Palun märkige ära sündmused, **mida olete läbi elanud viimase kahe aasta jooksul.** Sealjuures ei ole tähtis, kas need **mõjutasid Teid tugevalt või mitte.** Te võite märkida ka mitu sündmust.

Kõrvalolevasse tulpa palume kirjutada, millal Te sündmuse läbi elasite (piisab kuu ja aasta märkimisest).

Jah	Sündmus	Sündmuse toimumise aeg (kuu/aasta)	
	Lahutus või lahkuminek	Alates	/ kuni
	Konfliktid perekonnas	Alates	/ kuni
	Konfliktid kolleegidega	Alates	/ kuni
	Konfliktid ülemusega	Alates	/ kuni
	Lähedase haigestumine	Alates	/ kuni
	Lähedase surm		
	Lähedase sõbra surm		
	Pensionile jäämine		
	Töötus	Alates	/ kuni
	Liiga palju või liiga vähe tööd	Alates	/ kuni
	Surve tähtaegade täitmiseks või ajapuudus	Alates	/ kuni
	Elukoha vahetus	Alates	/ kuni
	Rahalised probleemid	Alates	/ kuni
	Haigestumine raskesse südamehaigusesse	Alates	/ kuni
	Liikumisvõime kahjustus	Alates	/ kuni
	Silmade või kõrvade raske	Alates	/ kuni

	haigus		
	Haigestumine vähki	Alates	/ kuni
	Teised rasked haigused	Alates	/ kuni
	Raske õnnetus	Alates	/ kuni
	Kallaletung	Alates	/ kuni
	Muu stressi tekitav olukord (mis?):	Alates	/ kuni
	Muu stressi tekitav olukord (mis?):	Alates	/ kuni
	Muu stressi tekitav olukord (mis?):	Alates	/ kuni

Teie poolt märgitud sündmustel võib olla tugev mõju inimese heaolule või käitumisele.
Palun kirjutage siia, milline sündmus või sündmused Teile kõige rohkem stressi tekitas:

……..……
.

Järgnevas osas leiate rea väiteid selle kohta, milliseid reaktsioone need sündmused võivad põhjustada. Palun valige enda jaoks kõige stressirikkam sündmus ja keskenduge sellele sündmusele. Märkige kõigepealt, **kui palju vastav väide Teie kohta käib** („üldse mitte“ kuni „sageli“). Seejärel palun märkige, **mis ajast alates Teil see reaktsioon esineb.** See võib olla vähem kui üks kuu (<1 kuu), alates umbes ühest kuust kuni poole aastani (1 – 6 kuud) või pool aastat kuni kaks aastat (6 kuud – 2 aastat). Tõenäoliselt ei ole seda kerge otsustada, aga katsuge siiski määrata oma reaktsiooni umbkaudne aeg. Kui Te aga ei märkinud eelpool ühtki stressi tekitavat sündmust, võite järgneva küsimustiku vahele jätta!

	Kui palju vastav väide Teie kohta käib?	**Mis ajast alates Teil see reaktsioon esineb?**

	Kui palju vastav väide Teie kohta käib?	Mis ajast alates Teil see reaktsioon esineb?
1. Stressi tekitava olukorra tõttu tunnen masendust ja kurbust	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
2. Teised inimesed ütlevad mulle, et stressi tekitav olukord on mind muutnud	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
3. Ma pean pidevalt stressi tekitava olukorra peale mõtlema	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
4. Püüan vältida stressi tekitavast olukorrast rääkimist	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
5. Pean ikka ja jälle stressi tekitavale olukorrale mõtlema ja see vaevab mind väga	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
6. Teen mulle varem meeldinud tegevusi oluliselt harvem	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
7. Kui ma mõtlen stressi tekitavale olukorrale, tunnen ma selget ärevust	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
8. Ma ei huvitu enam millestki	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
9. Väldin teatud asju, mis võiksid mulle meenutada stressi tekitavat olukorda	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat

	Kui palju vastav väide Teie kohta käib?	Mis ajast alates Teil see reaktsioon esineb?
10. Stressi tekitavast olukorrast peale tunnen teatud situatsioonides hirmu	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
11. Stressi tekitava olukorra tõttu olen juba mõelnud endalt elu võtta	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
12. Muretsen sellepärast, et sama asi võib veel juhtuda	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
13. Püüan stressi tekitavale olukorrale mitte mõelda, aga see õnnestub halvasti	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
14. Stressi tekitavast olukorrast peale olen närviline ja rahutu	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
15. Stressi tekitavast olukorrast peale hoidun teistest kõrvale	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
16. Stressi tekitavast situatsioonist saadik ärritun palju kergemini, ka pisiasjade peale	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
17. Stressi tekitavast situatsioonist saadik on mul raske teatud asjadele keskenduda	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat

	Kui palju vastav väide Teie kohta käib?	Mis ajast alates Teil see reaktsioon esineb?
18. Püüan stressi tekitavat situatsiooni oma mälust kustutada	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
19. Stressi tekitavast situatsioonist peale ei pea ma end teatud asjade jaoks enam võimeliseks	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
20. Olen märganud, et stressi tekitava situatsiooni tõttu olen kergesti ärrituv	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
21. Meenutan stressi tekitavat situatsiooni pidevalt ega saa sinna midagi parata	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
22. Püüan oma tundeid alla suruda, sest need vaevavad mind	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
23. Mu mõtted keerlevad kõige selle ümber, mis on seotud stressi tekitava situatsiooniga	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
24. Stressi tekitavast situatsioonist peale on mul hirm teha teatud asju või sattuda teatud olukordadesse	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat

	Kui palju vastav väide Teie kohta käib?	Mis ajast alates Teil see reaktsioon esineb?
25. Stressi tekitavast situatsioonist saadik teen tööd või argipäevaseid toimetusi vastumeelselt	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
26. Stressi tekitavast situatsioonist peale tunnen end ebakindlana ja mul ei ole tuleviku suhtes lootust	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
27. Stressi tekitavast olukorrast saadik ei saa ma enam õieti magada	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
28. Stressi tekitavast situatsioonist peale pole mul tahtmist midagi meeldivat plaanida või ette võtta	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
29. Olen stressi tekitavast situatsioonist saadik tõmbunud eemale oma perekonnast või sõpradest/tuttavatest	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
30. Stressi tekitava sündmuse järel ei suuda ma enam oma käitumist kontrollida	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat

	Kui palju vastav väide Teie kohta käib?	**Mis ajast alates Teil see reaktsioon esineb?**
31. Stressi tekitavast sündmusest alates olen siiani šokis	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
32. Mu söögiisu on muutunud	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
33. Alates stressi tekitanud olukorrast olen hakanud rohkem alkoholi tarbima või suitsetama	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
34. Viimasel ajal väsinud oluliselt kiiremini kui varem	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat
35. Tunnen, et mu füüsiline tervis on halvenenud (peavalud, lihaspinged)	Üldse mitte; harva; vahel; sageli	<1 kuu; 1 kuu – 6 kuud; 6 kuud – 2 aastat

Appendix B

The ICD-10 (WHO 1992).

F43.2 Adjustment disorders
States of subjective distress and emotional disturbance, usually interfering with social functioning and performance, and arising in the period of adaptation to a significant life change or to the consequences of a stressful life event (including the presence or possibility of serious physical illness). The stressor may have affected the integrity of an individual's social network (through bereavement or separation experiences) or the wider system of social supports and values (migration or refugee status). The stressor may involve only the individual or also his or her group or community.

Individual predisposition or vulnerability plays a greater role in the risk of occurrence and the shaping of the manifestations of adjustment disorders than it does in the other conditions in F43.-, but it is nevertheless assumed that the condition would not have arisen without the stressor. The manifestations vary, and include depressed mood, anxiety, worry (or a mixture of these), a feeling of inability to cope, plan ahead, or continue in the present situation, and some degree of disability in the performance of daily routine. The individual may feel liable to dramatic behaviour or outbursts of violence, but these rarely occur. However, conduct disorders (e.g. aggressive or dissocial behaviour) may be an associated feature, particularly in adolescents. None of the symptoms is of sufficient severity or prominence in its own right to justify a more specific diagnosis. In children, regressive phenomena such as return to bed-wetting, babyish speech, or thumb-sucking are frequently part of the symptom pattern. If these features predominate, F43.23 should be used.

The onset is usually within 1 month of the occurrence of the stressful event or life change, and the duration of symptoms does not usually exceed 6 months, except in the case of prolonged depressive reaction (F43.21). If the symptoms persist beyond this period, the diagnosis should be changed according to the clinical picture present, and any continuing stress can be coded by means of one of the Z codes in Chapter XXI of ICD-10.

Contacts with medical and psychiatric services because of normal bereavement reactions, appropriate to the culture of the individual concerned and not usually exceeding 6 months in duration, should not be recorded by means of the codes in this book but by a code from Chapter XXI of ICD-10 such as Z63.4 (disappearance or death of family member) plus for example Z71.9 (counselling) or Z73.3 (stress not elsewhere classified). Grief reactions of any duration, considered to be abnormal because of their form or content, should be coded as F43.22, F43.23, F43.24 or F43.25, and those that are still intense and last longer than 6 months as F43.21 (prolonged depressive reaction).

Diagnostic guidelines

Diagnosis depends on a careful evaluation of the relationship between:

(a) form, content, and severity of symptoms;
(b) previous history and personality; and
(c) stressful event, situation, or life crisis.

The presence of this third factor should be clearly established and there should be strong, though perhaps presumptive, evidence that the disorder would not have arisen without it. If the stressor is relatively minor, or if a temporal connection (less than 3 months) cannot be demonstrated, the disorder should be classified elsewhere, according to its presenting features.

Includes: culture shock
grief reaction
hospitalism in children
Excludes: separation anxiety disorder of childhood (F93.0)

If the criteria for adjustment disorder are satisfied, the clinical form or predominant features can be specified by a fifth character:

F43.20 Brief depressive reaction

A transient, mild depressive state of duration not exceeding 1 month.

F43.21 Prolonged depressive reaction

A mild depressive state occurring in response to a prolonged exposure to a stressful situation but of
duration not exceeding 2 years.

F43.22 Mixed anxiety and depressive reaction

Both anxiety and depressive symptoms are prominent, but at levels no greater than specified in mixed
anxiety and depressive disorder (F41.2) or other mixed anxiety disorder (F41.3).

F43.23 With predominant disturbance of other emotions

The symptoms are usually of several types of emotion, such as anxiety, depression, worry, tensions, and anger. Symptoms of anxiety and depression may fulfil the criteria for mixed anxiety and depressive disorder (F41.2) or other mixed anxiety disorder (F41.3), but they are not so predominant that other more specific depressive or anxiety disorders can be diagnosed. This category should also be used for reactions in children in which regressive behaviour such as bed-wetting or thumb-sucking are also present.

F43.24 With predominant disturbance of conduct

The main disturbance is one involving conduct, e.g. an adolescent grief reaction resulting in aggressive or dissocial behaviour.

F43.25 With mixed disturbance of emotions and conduct

Both emotional symptoms and disturbance of conduct are prominent features.

F43.28 With other specified predominant symptoms

DSM-IV-TR (APA, 2000)

Adjustment Disorders

Common Characteristics

All of the disorders in this category relate to a significantly more difficult adjustment to a life situation than would normally be expected considering the circumstances. While it is common to need months and perhaps even years to feel normal again after the loss of a long time spouse, for instance, when this adjustment causes significant problems for an abnormal length of time, it may be considered an adjustment disorder.

The disorders in this category can present themselves quite differently. The key to diagnosing is to look at (1) the issue that is causing the adjustment disorder and (2) the primary symptoms associated with the disorder.

Diagnostic criteria for Adjustment Disorders

A. The development of emotional or behavioral symptoms in response to an identifiable stressor(s) occurring within 3 months of the onset of the stressor(s).

B. These symptoms or behaviors are clinically significant as evidenced by either of the following:

(1) marked distress that is in excess of what would be expected from exposure to the stressor
(2) significant impairment in social or occupational (academic) functioning

C. The stress-related disturbance does not meet the criteria for another specific Axis I disorder and is not merely an exacerbation of a preexisting Axis Ior Axis II disorder.

D. The symptoms do not represent Bereavement.

E. Once the stressor (or its consequences) has terminated, the symptoms do not persist for more than an additional 6 months.

Specify if:

Acute: if the disturbance lasts less than 6 months
Chronic: if the disturbance lasts for 6 months or longer Adjustment Disorders are coded based on the subtype, which is selected according to the predominant symptoms.

The specific stressor(s) can be specified on Axis IV.

309.0 With Depressed Mood
309.24 With Anxiety
309.28 With Mixed Anxiety and Depressed Mood
309.3 With Disturbance of Conduct
309.4 With Mixed Disturbance of Emotions and Conduct
309.9 Unspecified

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