

# Cultural adaptation of *Hap-pas-Hapi*, an internet and mobile-based intervention for the treatment of psychological distress among Albanian migrants in Switzerland and Germany



Mirëlinda Shala<sup>a,\*</sup>, Naser Morina<sup>b</sup>, Sebastian Burchert<sup>c</sup>, Arlinda Cerga-Pashoja<sup>d,e</sup>, Christine Knaevelsrud<sup>c</sup>, Andreas Maercker<sup>a</sup>, Eva Heim<sup>a</sup>

<sup>a</sup> Psychopathology and Clinical Intervention, Department of Psychology, University of Zurich, Switzerland

<sup>b</sup> Department of Consultation-Liaison Psychiatry and Psychosomatic Medicine, University Hospital of Zurich, University of Zurich, Switzerland

<sup>c</sup> Division of Clinical-Psychological Intervention, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany

<sup>d</sup> Faculty of Population Health, London School of Hygiene and Tropical Medicine, London, United Kingdom

<sup>e</sup> Central and North West London NHS Foundation Trust, London, United Kingdom

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## ABSTRACT

**Background:** Internet- and mobile-based mental health interventions have the potential to narrow the treatment gap in ethnic groups. Little evidence exists on the cultural adaptation of such interventions. Cultural adaptation of evidence-based interventions distinguishes between surface and deep structure adaptation. Surface refers to matching materials (e.g., illustrations, language) or methods of treatment delivery to the target population, whereas deep structure adaptation considers cultural concepts of distress (CCD). So far, CCD have only been considered to a limited extent in cultural adaptation of psychological interventions, and there is a lack of well documented adaptation procedures.

**Aims:** With a cross-disciplinary and mixed-method approach, following a new conceptual framework for cultural adaptation of scalable psychological interventions, this study aimed to develop both surface and deep structure adaptations of an internet- and mobile-based intervention called *Hap-pas-Hapi* for the treatment of psychological distress among Albanian migrants in Switzerland and Germany.

**Methods:** A qualitative ethnopsychological study was conducted to examine the target group's CCD. Focus group discussions, an online survey, and individual key informant interviews were utilised to evaluate the original intervention, adaptation drafts and the final adapted intervention. A reporting system was developed to support the decision-making process and to report all adaptations in a transparent and replicable way.

**Results:** The ongoing involvement of target population key informants provided valuable feedback for the development of a more person-centred intervention, which might enhance treatment acceptance, motivation and adherence.

**Discussion:** This study provides empirical and theory-based considerations and suggestions for future implementation that may foster acceptability and effectiveness of culturally adapted evidence-based interventions.

## 1. Introduction

High prevalence rates of common mental disorders among migrants from different ethnic groups (i.e., naturalized, immigrants, asylum-seekers, refugees) (e.g., Bäärnhielm et al., 2017; Eytan et al., 2002; Hassan et al., 2015) appear to be inconsistent with the use of mental health services worldwide (Bemme and Kirmayer, 2020; Fernando,

2014; Kirmayer et al., 2007). Although specialized mental health services are available in high-income countries, data from several studies have identified limited access of migrants to mental health care utilization. Findings indicate that structural and cultural factors (in particular immigrant status, economic status, language, reliance on family members for support, stigma, or varying assumptions about mental illness) may limit access to treatment (Dow, 2011; Kayrouz et al.,

\* Corresponding author.

E-mail addresses: [mirelinda.shala@uzh.ch](mailto:mirelinda.shala@uzh.ch) (M. Shala), [naser.morina@usz.ch](mailto:naser.morina@usz.ch) (N. Morina), [s.burchert@fu-berlin.de](mailto:s.burchert@fu-berlin.de) (S. Burchert), [Arlinda.Cerga-Pashoja@lshtm.ac.uk](mailto:Arlinda.Cerga-Pashoja@lshtm.ac.uk) (A. Cerga-Pashoja), [christine.knaevelsrud@fu-berlin.de](mailto:christine.knaevelsrud@fu-berlin.de) (C. Knaevelsrud), [maercker@psychologie.uzh.ch](mailto:maercker@psychologie.uzh.ch) (A. Maercker), [e.heim@psychologie.uzh.ch](mailto:e.heim@psychologie.uzh.ch) (E. Heim).

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2015b; Kirmayer et al., 2007; Kiselev et al., 2020b, 2020a; Ugarte Bustamante et al., 2020). But also in low- and middle-income countries there is growing interest in delivering psychological interventions to culturally diverse populations, in order to narrow the large treatment gap for common mental disorders (Alonso et al., 2018; Bäärnhielm et al., 2017; Cuijpers et al., 2018; van't Hof et al., 2020).

In the last decade, there has been an increasing number of publications that point to the necessity and importance of developing culturally adapted evidence-based interventions (e.g., Bernal et al., 2009; Bernal and Sáez-Santiago, 2006; Castro et al., 2010; Chu and Leino, 2017; Hinton and Patel, 2017), that are potentially scalable (e.g., de Graaff et al., 2020; Heim et al., 2018; Heim and Kohrt, 2019; Patel et al., 2018; Robles et al., 2019; Sijbrandij et al., 2017; van't Hof et al., 2020; WHO, 2017). The main purpose of cultural adaptation is to increase acceptability, relevance and effectiveness of psychological interventions in culturally diverse populations worldwide. Several studies showed that culturally adapted interventions are effective (Chowdhary et al., 2014; Griner and Smith, 2006; Rathod et al., 2018), and more effective than the unadapted version of the same intervention (Hedge's  $g = 59.052$ ) (Hall et al., 2016). Smith et al. (2011) and Harper Shehadeh et al. (2016) found that the more adapted elements are considered in the adaptation, the higher the effectiveness of interventions. However, empirical studies still face the challenge of finding "what works" (Bemme, 2019; Degnan et al., 2018; Hall et al., 2016; Rathod et al., 2018). Especially the lack of standardized procedures for cultural adaptation makes it difficult to validate and replicate adaptation methods and to compare outcomes. Several meta-analyses have pointed out that the vast majority of original studies do not provide detailed descriptions of the cultural adaptations applied (Harper Shehadeh et al., 2016; Kalibatseva and Leong, 2014; Pedersen et al., 2015), and a systematic understanding of substantial modifications is still lacking (Castro et al., 2010; Chu and Leino, 2017; Elliott and Mihalic, 2004).

Internet and mobile-based interventions appear to be promising for potential scalability and may therefore contribute to narrow the worldwide treatment gap, particularly among "hard-to-reach populations" such as culturally diverse populations (e.g., Abi Ramia et al., 2018; Atallah et al., 2018; Burchert et al., 2019; Carswell et al., 2018; Cuijpers et al., 2008; Garabiles et al., 2019; Hedman et al., 2012; Kayrouz et al., 2018; Muñoz, 2010; Sijbrandij et al., 2017; Wang et al., 2013). Through large randomized controlled trials (RCTs) and pilot studies, several research groups seek to examine the effectiveness of culturally adapted online-interventions for treating common mental disorders such as depression, anxiety or post-traumatic stress disorder (PTSD) and culturally shaped concepts of distress in different indigenous cultures and their diaspora (Harper Shehadeh et al., 2020; Kayrouz et al., 2015a, 2016b; Reich et al., 2019; Salamanca-Sanabria et al., 2018, 2020; Sidani et al., 2018; Slobodin et al., 2018; Ünlü Ince et al., 2013; van't Hof et al., 2020).

However, due to small sample sizes and high attrition rates in the pilot studies (Harper Shehadeh et al., 2020; Kayrouz et al., 2016b, 2016a; Salamanca-Sanabria et al., 2020), only cautious assumptions can be made concerning statistically substantial effects on the reduction of distressing symptoms. However, the largely positive results on feasibility and acceptability of the mentioned studies seem promising, emphasizing the need for culturally adapted interventions.

In recent years, several studies have provided detailed information on the cultural and contextual adaptation of such internet- and mobile-based interventions. For example research on ethnically diverse groups in Lebanon (Abi Ramia et al., 2018), Syrian refugees residing in Germany, Sweden, and Egypt (Burchert et al., 2019), overseas Filipino domestic workers living in Macao (Garabiles et al., 2019), Arabs from countries of origin or immigrants in Australia (Kayrouz et al., 2016b, 2016a), university students in Colombia (Salamanca-Sanabria et al., 2020, 2019, 2018), Chinese Canadians (Sidani et al., 2018), asylum seekers from Middle East residing in the Netherlands (Slobodin et al.,

2018), and Turkish migrants in the Netherlands (Ünlü Ince et al., 2013).

Despite these attempts, there is still no golden standard on how cultural adaptation should be implemented (Rathod et al., 2018; Salamanca-Sanabria et al., 2019). Over the last decades, several frameworks have been developed to tackle this issue (Bernal et al., 2009, 1995; Bernal and Sáez-Santiago, 2006; Cardemil, 2008; Chu and Leino, 2017; Naeem et al., 2016; Rathod et al., 2019; Resnicow et al., 1999). Numerous studies on the cultural adaptation of psychological interventions used the framework of Bernal et al. (1995; Bernal and Sáez-Santiago, 2006). However, studies have criticised the framework due to reported difficulties with implementing the elements in real-world settings (Chu and Leino, 2017). Further, the framework was developed for face-to-face treatments and its use for internet-based interventions is limited (Harper Shehadeh et al., 2016).

Resnicow et al. (1999) distinguish between surface and deep structure adaptation of health interventions. Surface adaptation aims to match materials to the visible characteristics of the target population, e.g., by tailoring illustrations and language or channels and settings for treatment delivery. Deep structure adaptation, on the other hand, refers to the fact that cultural, social, environmental, or historical aspects affect health. Such adaptations are rooted in explanatory models (Kleinman, 1978) about the cause, course, and treatment of disorders in the target group. Resnicow et al. (1999) developed their framework for health promotion programmes in general. In view of deep structure adaptation of psychological interventions, we argue that it may be relevant to consider cultural concepts of distress (American Psychiatric Association, 2013; Kohrt et al., 2014).

### 1.1. Cultural adaptation of scalable psychological interventions – a new conceptual framework

Based on empirical evidence from ethnopsychological studies, cultural adaptation research, and psychotherapy research, Heim and Kohrt (2019) developed a new conceptual framework for cultural adaptation of scalable psychological interventions for the treatment of common mental disorders. This framework encompasses the following three elements: i) cultural concepts of distress; ii) treatment components; and iii) treatment delivery. The authors suggest considering these elements sequentially.

- i) Cultural concepts of distress encompass idioms of distress, cultural explanations, and cultural syndromes (Lewis-Fernández and Kirmayer, 2019). Cultural adaptation may benefit from exploring discursive constructions of psychological distress and mental illness, which are inherent in the cultural context of the target population. Diagnostic categories for mental disorders developed in Western, Educated, Industrialized, Rich, and Democratic (WEIRD) countries (Henrich et al., 2010) may not be applicable among culturally diverse groups. Ryder and Chentsova-Dutton (2015) therefore recommend using the broader term "serious distress", which they define "as the set of clinically significant problems characterized by dysphoria and anxiety rather than on specific diagnostic categories such as major depression, social anxiety disorder" (p. 403). With regard to psychological distress, it is important to consider symptoms that are pathologized or non-pathologized (Acharya et al., 2017) in a given culture, along with idioms of wellness or resilience (Lewis-Fernández and Kirmayer, 2019).

In addition, other cultural aspects shape people's experiences of psychological distress, such as cultural concepts of the self. Kirmayer (2007) distinguishes between the "egocentric" and "sociocentric" notion of the self. The egocentric self-concept is shaped by personal history, individualistic and autonomous values, whereas the sociocentric self includes the family and community, thus refers to collectivist and interdependent values. With regard to mental health, shared suffering and social support within the family and the community are typical for

socio-centric societies (Heine, 2016; Kirmayer, 2007; Triandis, 1989). Health beliefs are also shaped by culture. As an example, Reich et al. (2015) showed in a study that fatalistic beliefs about mental distress resulted in lower motivation for psychotherapy among Turkish immigrants in Germany. Reich et al. (2019) developed an internet-based intervention to reduce such fatalistic beliefs. Their results suggest that addressing fatalistic beliefs in cultural adaptation of psychological interventions may enhance treatment motivation.

- ii) The second element of Heim and Kohrt's (2019) conceptual framework refers to the cultural adaptation of treatment components. The authors drew on a taxonomy developed by Singla et al. (2017), which distinguishes between specific and nonspecific treatment components, and in-session techniques. Specific components are grounded in basic psychological mechanisms (e.g., emotional, behavioural, cognitive, or interpersonal interventions), whereas the nonspecific components are universal to the therapy experience (e.g., collaboration, empathy, normalising). Techniques are skills that the therapist implements during a session. Heim and Kohrt (2019) suggest that the selection of components and techniques should ideally be dovetailed with evidence on cultural concepts of distress in the target population.
- iii) And third, the authors suggest adapting methods of treatment delivery to the target population and context, to enhance engagement. This includes an appropriate selection of the delivery format (e.g., face-to-face, internet-based, minimally guided), as well as the surface adaptation of the intervention materials (e.g., culturally appropriate language and metaphors, relevant illustrations). Most adaptations described in recent studies can be situated within this third element of the conceptual framework (e.g., Abi Ramia et al., 2018; Burchert et al., 2019; Garabiles et al., 2019; Salamanca-Sanabria et al., 2019; Sidani et al., 2018).

Although these elements have been discussed in the literature, there is a lack of empirical evidence on their respective relevance. Heim and Kohrt (2019) encourage to empirically test these adaptation elements with innovative research designs, in order to gain a better understanding of substantial modifications in cultural adaptation. In this study, we used an e-mental health intervention called Step-by-Step (Carswell et al., 2018) and culturally adapted it for Albanian-speaking migrants in Switzerland and Germany following this framework.

## 1.2. The Step-by-Step intervention

Step-by-Step was developed by the World Health Organization (WHO) in close collaboration with the Ministry of Public Health in Lebanon and Freie Universität Berlin, Germany. The intervention is built on the following evidence-based cognitive behavioural therapy (CBT) techniques: i) stress management, ii) behavioural activation, iii) positive self-talk, iv) promotion of social support, and v) relapse prevention. It comprises five sessions and uses a narrative approach, in which different fictional characters tell their illustrated story of how they overcame psychological distress. An illustrated doctor provides psychoeducation and introduces the interactive exercises, e.g., a breathing exercise (audio) or planning positive activities using input fields and a calendar. The concept of Step-by-Step is further described by Carswell et al. (2018).

The first English version of the Step-by-Step content was written in a "generic" manner, designing illustrations and narratives in a way that they can potentially speak to people from different contexts (Carswell et al., 2018). Thereafter, it was translated into Arabic and culturally adapted for different cultural groups living in Lebanon (Abi Ramia et al., 2018). This cultural adaptation was based on an unpublished WHO adaptation protocol, in which the entire intervention is read through in focus groups. Based on cognitive interviewing techniques, participants give feedback on their understanding and the acceptability

of the content. The adaptations done in the Arabic version were mostly surface adaptations according to Resnicow et al. (1999).

The first version of Step-by-Step was programmed as a web-based intervention and tested in an uncontrolled pilot study in Lebanon (Harper Shehadeh et al., 2020). Dropout rates were high in this first study (approx. 80%). Feedback from a qualitative process analysis showed that the story was overly long and repetitive. Also, younger participants expressed that they could not relate to the married protagonists of the stories who had children. In addition, most participants expressed their wish for a more interactive intervention than this first web-based platform offered. Based on this feedback, a smartphone-app version was programmed, which can be accessed through a mobile app (iOS or Android) or a web-browser (Burchert et al., 2019). In addition, a story writer was contracted to render the story more engaging and to create two additional storylines for unmarried characters.

The WHO plans to use Step-by-Step among culturally diverse groups in low-resource settings, with minimal (surface) adaptations being done for economic reasons. A version for Filipino immigrants was developed in Macau (Garabiles et al., 2019). Effectiveness and cost-effectiveness of Step-by-Step will be tested in three parallel RCTs among Syrian refugees in Germany, Sweden, and Egypt ( $N = 500$  per site) within the EU-funded STRENGTHS project (Sijbrandij et al., 2017), and in two parallel RCTs among Syrian refugees and other people residing in Lebanon ( $N = 500$  per group), under the lead of WHO and the Lebanese Ministry of Public Health. The original version of Step-by-Step is minimally guided, which means that e-helpers provide a maximum of 15 min weekly support. For the STRENGTHS trials, a contact-on demand model was developed for reasons of scalability. In this model, users can contact the e-helpers through a chat system if they have a specific question (Burchert et al., 2019).

In the present study, the Albanian version of Step-by-Step, called *Hap-pas-Hapi*, was culturally adapted for Albanian-speaking migrants in Switzerland and Germany. Two different versions were developed: A surface and a deep structure adaptation (Resnicow et al., 1999). These two versions will be compared in a randomized controlled trial (RCT) to gain evidence on the effect of deep structure adaptation on the acceptability and effectiveness of *Hap-pas-Hapi* (Heim et al., 2020). This paper aims to document the process of cultural adaptation for the target population in a transparent and replicable manner.

## 1.3. Target population

The target population of *Hap-pas-Hapi* are adult participants with Albanian-speaking migration background living in Switzerland and Germany, which show mild to moderate symptoms of psychological distress. This target population was described more in detail in Shala et al. (2020). Due to pre-migration stressors (e.g., war, political persecution) and post-migration living difficulties (e.g., language barriers, integration, family problems) this population group is described as vulnerable in several studies, showing high prevalence rates for depression, post-traumatic stress disorder (PTSD) and anxiety disorders (e.g., Morina et al., 2016). With reference to Ryder and Chentsova-Dutton (2015), we use the transdiagnostic concept of psychological distress for the present study.

As Resnicow et al. (1999) point out, it is vital to assume significant heterogeneity of the target population, because subgroups differ in their religious beliefs, educational levels, degree of acculturation and country of origin. Ethnic Albanians largely migrated to Switzerland or Germany from countries such as Kosovo, North Macedonia, Serbia, Albania; through labour migration, flight, or family reunification (Burri Sharani et al., 2010; Dahinden, 2013; German Federal Statistical Office, 2019; Swiss Federal Statistical Office, 2017). Besides the different migration patterns, the distinctive historical and political developments of these countries should not be underestimated in the analysis of etiological assumptions about suffering and trauma among this population. Several studies in Switzerland and Germany have shown that migrants of

Albanian or Kosovan origin are the most exposed to labour market discrimination (Koopmans et al., 2013; Zschirnt and Fibbi, 2019). Further, several studies have shown that it is a distinct characteristic of Albanian individuals that the needs of family members are put above one's own needs (Dow, 2011; Heigl et al., 2011; Shala et al., 2020). Therefore, it seems highly important that the intervention not only addresses the individual, but also respects collective narratives, community needs and the sociocentric self-concept of the user.

#### 1.4. Ethnopsychological study on CCD among Albanian-speaking migrants

In line with the cultural adaptation framework by Heim and Kohrt (2019), we started with an ethnopsychological study to examine the target populations' cultural concepts of distress. For this purpose, we conducted 20 qualitative interviews to find out which CCD are relevant among the Albanian-speaking migrants in Switzerland.

The results of the ethnopsychological study have been published elsewhere in detail (Shala et al., 2020). The key mental health-related concepts were “vuajtje” (suffering, misery), “brenjë” (concern, care), “mërzi” (sorrow, grief, sadness), “nervozë” (tension, anger, fury), and “frikë” (fear, anxiety), and they were perceived as “zinxhirore” (chain-like) or “pandashëm” (inseparable). The study also revealed trauma-related metaphors and symptoms such as “pikë në zemër” (point in the heart), “plagë” (wound), “lëndim shpirti” (hurt/pain/wounding of the soul/spirit), and “gjak të nxehtë” (hot blood).

As causes for the participants' distress, pre-migration stressors (e.g., war, torture) and post-migration living difficulties (e.g., integration, loss of social status, discrimination, language) were named above all. In addition, unfulfilled desires (e.g., economic wealth, return to the country of origin) were perceived as particularly stressful and led to rumination and hopelessness. In Albanian explanations of distress, causes appear to be inherent in symptoms; thus, when using a specific idiom of distress, the corresponding cause seems to be implicitly meant, as well. For example, “vuajtje” can implicitly refer to post-migratory living difficulties, and “mërzi” can point to homesickness/nostalgia or the loss of a beloved person.

There was also a tendency towards low expectations of change due to the fatalistic notion that suffering is part of life and has to be endured with “durim” (patience) and that this would last a lifetime. An age difference emerged with regard to fatalistic beliefs: While older participants expressed that psychological problems can be solved mostly within the family; younger participants' reports showed a higher tendency to seeking mental health care in severe cases. However, although the social environment seems to play a vital role in coping with problems, most participants (of different age) pointed out that they deal with emotional difficulties on their own and do not want to burden their family with it. Self-management and social support were described as the most important coping behaviours, while little trust in psychotherapy was expressed.

## 2. Methods and materials

### 2.1. Procedure

We developed a theory-based, cross-disciplinary and mixed-method approach to facilitate a surface and deep cultural adaptation of Hap-pas-Hapi for Albanian-speaking migrants in Switzerland and Germany. In the following, we describe the phases of the adaptation procedure.

#### 2.1.1. Translation and surface adaptation of content

The original Step-by-Step story in English language was translated to Albanian by an independent translator in Pristina, Kosovo, and then reviewed for accuracy of the psychological terminology, comprehensibility, and linguistic accuracy by two native-speaking mental-health professionals from Kosovo and Albania, who were not part of the research team. To maintain comprehensibility and legibility of meanings

(especially in regards to idioms of distress and metaphors), different translation methods were applied. Venuti (2000) distinguishes between the direct, or literal translation and oblique translation. Adaptation is considered to be one method of oblique translation, that is used when the content of the source language is unknown in the target language. This special kind of “situational equivalence” (Venuti, 2000, p. 90) was the aim of both translators and researchers that carried out the cultural adaptation. In this process, several text passages were identified that did not permit a literal translation but required adaptation. Metaphors and idioms collected in the ethnopsychological study (Shala et al., 2020) were used in such adaptations, inspired by research on metaphors and idioms of distress in cultural clinical psychology (Rechsteiner et al., 2020). Translations were validated by consulting dictionaries, discussing essential idioms and metaphors in focus group discussions (FGDs), and gathering opinions of the Albanian-speaking team members.

#### 2.1.2. Literature review

The main findings of the ethnopsychological study (Shala et al., 2020) showed that external control attributions hindered help-seeking and treatment motivation among the target population. Based on these results, we conducted a literature review to search for evidence on how to address fatalism and enhance treatment motivation among culturally diverse groups, mainly through Internet-based interventions. In this search, we used search terms such as “e-mental health”, “internet-based”, “motivational interviewing”, “effectiveness”, “cultural context”, “self-efficacy”, “locus of control”, “fatalism”, “external control belief”, and “self-care”. The databases CINAHL, Medline, PsychInfo, and PubMed were used for this purpose, without any time, language, or geographical limitation.

#### 2.1.3. Development of new intervention components

Based on the formative research and the literature review, new intervention components were developed and iteratively adapted based on FGDs, the online survey, and key informant (KI) interviews (see below).

#### 2.1.4. Focus group discussions

Ten FGDs were conducted in Albanian language by the first author (MS) following recommendations for cognitive interviewing techniques by Willis and Artino (2013). The FGDs were carried out between July 2018 and January 2019 in Zurich, Switzerland, and Berlin, Germany. FGDs lasted two and a half hours on average, directly protocolled by two study assistants. In addition, the group discussions were audio recorded and transcribed.

At start, rules on the procedure of the FGD were presented in Albanian and German language. The participants were free to speak in their preferred language. They were informed about the concept and the story of Hap-pas-Hapi. In the first round (July 2018, Zurich, three groups), participants were asked to read aloud through the entire story of the translated original (generic) version, and everyone was encouraged to speak up if anything was unclear or irritating to them. In addition, acceptability of the character profiles, illustrations, and activities for behavioural activation were discussed. Feedback was integrated before conducting the second round, especially concerning character profiles, examples of activities, and language. In the second round (January 2019, Zurich & Berlin, seven groups), the deep structure adaptation was presented and discussed (for details, see below). Comprehensibility and adequacy of the adapted idioms of distress and metaphors, as well as the feasibility of the stress reduction techniques (breathing and grounding exercise), were examined. The final discussion of every group was prompted by the following questions: 1) Would you use this programme? 2) Do you have your own phone, or do you share it with another person? When would be the best time to use the programme? 4) Where would be the best place to use the programme?

Participants of the FGDs and the online survey were divided into

**Table 1**  
Professional background of the medical and cultural experts in FGDs.

Expert-Nr.	Age	Gender	Nationality	Place of birth	Current occupation	Length of time living in Switzerland/Germany	Community/institution where the expert is working	Working area	Experience in the field of mental health in years
1	37	m	Albanian	Albania	Ph.D. student	Short stay (< 5 months)	University, Institute of Psychology	Zurich, CH	3
2	38	f	Swiss	Kosovo	Translator	27	Association for Social Affairs and Health	Zurich, CH	3
3	55	f	Swiss	Switzerland	Development assistant	55 (born in CH)	Development Aid Organisation	Zurich, CH	10
4	44	f	Swiss & Kosovan	Kosovo	Interpreter	23	Association for Social Affairs and Health	Basel, CH	3
5	28	f	Swiss, Macedonian	Switzerland	Ph.D. student	28 (born in CH)	Student Association	Zurich, CH	No
6	65	m	Kosovan	Kosovo	Physician	25	Association for Social Affairs and Health	Zurich, CH	10
7	36	f	Kosovan	Not specified	Clinical psychologist	Not specified	Private Clinic for Psychotherapy	Zurich, CH	5.5
8	38	m	Swiss	North Macedonia	Mediator	Not specified	Association for Social Affairs and Health	Zurich, CH	No
9	55	f	German	Kosovo	Lecturer for smoking cessation courses	5	Swiss Research Institute of Public Health and Addiction	Zurich, CH	4
10	54	m	German	Kosovo	Physician	6	Private Practice, General Practitioner	Zürich, CH	No
11	50	f	German	Kosovo	Medical informatics and scientist	6	University Hospital Basel	Basel, CH	No
12	42	f	Swiss	Kosovo	Albanian teacher	18	Albanian Teachers and Parents Association	Zürich, CH	No
13	24	f	Swiss	Switzerland	Intensive care nursing	24	Cantonal Hospital Aargau/Nursing	Aargau, CH	No
14	52	f	German	Kosovo	Systemic family counselling	25	Intercultural Child and Youth Services	Berlin, DE	8
15	39	f	Kosovan	Albania	Psychological therapist	11	Charité Pain Clinic, Private Practice	Berlin, DE	11

two groups (medical/cultural/language experts and potential users) based on their experience and knowledge about the Albanian-speaking community in Switzerland and Germany. Experts ( $n = 15$ ) were recruited through web searches for health or social services and social media. They were i) general practitioners or specialized doctors who had frequent contact with Albanian-speaking patients; ii) chairs of Albanian cultural associations; iii) teachers; iv) employees of public institutions; v) researchers focusing on the Albanian-speaking community. Nine experts had experience in mental health (i.e., in research, counselling or therapy) ranging from three up to 11 years (Table 1).

Participants who were potential users ( $n = 27$ ) were recruited from the general population through social media and via direct contact within the personal social network of the research team members. The only selection criterion was Albanian language proficiency. Participants were not asked about their mental health status. All participants themselves had a migration background from Albanian-speaking countries and could identify content in the intervention that did not or only slightly correspond to their respective cultural group.

Sociodemographic characteristics were assessed to have a well-balanced representation of different subgroups (e.g., gender, age, marital status, immigration status, educational level, use of language). A total of  $N = 42$  persons participated in the FGDs (female:  $n = 28$ , male:  $n = 14$ ;  $n = 20$  unmarried,  $n = 21$  married,  $n = 1$  widowed) with a mean age of 35 (range: 19–65). Of these,  $n = 10$  were born in Switzerland,  $n = 10$  in Albania,  $n = 16$  in Kosovo,  $n = 4$  in North Macedonia,  $n = 2$ : not specified. The mean duration of stay in Switzerland/Germany was 15 years (range: 0.5–55;  $n = 3$ : not specified). The educational level was reported as follows: Primary or lower secondary level:  $n = 1$ , Upper and post-secondary level:  $n = 19$ ; Tertiary education and above:  $n = 22$ . As main language in everyday life,  $n = 26$  participants stated that they use Albanian-language, while  $n = 9$  use German-language, and  $n = 7$  were bilingual.

The consent form, which was sent to participants prior to the interview, was discussed point-by-point verbally before being signed. The participants were informed that they could stop the interview at any time without explaining.

**2.1.5. Online survey**

An online survey was conducted to finalise adaptation. With this survey, we aimed to identify the most common and essential symptoms and causes of distress in the target population. Based on the ethnopsychological study and the suggestions from the FGDs, 19 symptoms and 14 causes of distress were compiled for rating. The survey was done between April and May 2019. Of the 42 invited FGD participants,  $n = 25$  participated in the symptom ranking and  $n = 24$  in the causes ranking.

**2.1.6. Key informant interviews**

In the final phase of the adaptation process,  $n = 8$  key informants (female:  $n = 4$ , male:  $n = 4$ ; mean age of 36, range: 21–56 years) were asked to beta test Hap-pas-Hapi and “think aloud” (Willis and Artino, 2013) on their experiences and reflections about the acceptability and usability of the app. In addition, a semi-structured interview was developed, especially to gather their views on fatalism and treatment motivation.

**2.1.7. Decision-making and expert reviews**

A two-day adaptation workshop took place in Berlin, Germany, which was attended by five research members and three study assistants. The workshop was used to evaluate results of the first FGDs and to decide on the most essential adaptations and further steps.

For the final version of the adapted intervention, a decision-making process was developed. First, MS (the first author) and a psychology student (AH) collected and incorporated linguistic suggestions from the FGDs into the story of Hap-pas-Hapi. Second, MS marked the text passages in the story that required decisions from the team (because the

**Table 2**  
Overview of adaptations for Hap-pas-Hapi.

Category	Sub-category	Original (generic) Step-by-Step	Adaptations in Hap-pas-Hapi	Source of information
Treatment components	Specific elements	<ul style="list-style-type: none"> <li>● Behavioural activation</li> <li>● Stress management</li> <li>● Cognitive restructuring</li> <li>● Social support</li> <li>● Relapse prevention</li> </ul>	None	
	Non-specific elements	<ul style="list-style-type: none"> <li>● Normalisation</li> <li>● Validation</li> <li>● Involvement of significant other</li> </ul>	<p>In addition to the original elements, providing a convincing treatment rationale:</p> <ul style="list-style-type: none"> <li>● Including idioms of distress in symptom narratives</li> <li>● Disentangling symptoms and causes</li> <li>● Explaining how behaviour and mood are linked</li> </ul>	<ul style="list-style-type: none"> <li>● Ethnopsychological study</li> <li>● Focus groups</li> <li>● Online survey</li> <li>● Key informant interviews</li> </ul>
	In-session techniques	<ul style="list-style-type: none"> <li>● Psychoeducation</li> <li>● Assigning homework</li> <li>● Giving praise</li> </ul>	<ul style="list-style-type: none"> <li>● Goal setting</li> <li>● Involvement of a person of trust</li> </ul>	<ul style="list-style-type: none"> <li>● Ethnopsychological study</li> <li>● Focus groups</li> <li>● Key informant interviews</li> </ul>
Treatment delivery	Delivery format	<ul style="list-style-type: none"> <li>● Self-help intervention provided through mobile app</li> <li>● Minimally guided or contact-on-demand</li> </ul>	<ul style="list-style-type: none"> <li>● None</li> <li>● Contact on-demand</li> </ul>	
	Surface adaptations	<ul style="list-style-type: none"> <li>● Language, illustrations</li> </ul>	<ul style="list-style-type: none"> <li>● Language, metaphors, illustrations</li> </ul>	<ul style="list-style-type: none"> <li>● Focus groups</li> </ul>

evidence was not conclusive) and suggested changes based on the formative research and her own reflections. Third, the other team members read the corresponding text passages, gave their agreement, or made additional suggestions. In an iterative process (by including web-calls and e-mails) final agreements were achieved across the five Albanian-speaking team members (MS, NM, ACP; and the two psychology students AH, AM\*).

Minor suggestions on syntactic and stylistic sentence changes for better legibility were directly accepted by the first author (MS) and not documented due to the large quantity. Major suggestions for sentence and word changes, and comments based on regional and dialectal differences, were discussed among the team members. As the team consisted of members from Albanian or Kosovan descent, terms and sentences were found that seemed comprehensible for both regions (gheg and tosk dialects).

## 2.2. Monitoring and documentation of the adaptation procedure

An adaptation monitoring sheet (see Supplementary materials) was developed to guide the decision-making and adaptation procedure. This method had several advantages and purposes: The sheet was used during the adaptation process as a basis for decision-making as well as for documenting all modifications in the different intervention components. By numbering all decisions and setting the corresponding number in the story text, team members were able to quickly find the location of parts to be adapted. Two columns provided information on the results of formative research in relation to the quality of the evidence (strong: discussed and agreed in > 3 focus groups; moderate: discussed in 1–2 focus groups or divided opinions; weak: opinion of individual persons). This information served as a basis for discussion and decision-making. The column containing the research team's suggestions and decisions was continuously updated during the iterative adaptation process. The last columns showed decisions that were made and the ones that were pending. The content was provided (and continuously adapted) in English and Albanian; hence, all team members could follow the decision-making process.

## 2.3. Data analysis

FGDs were transcribed in original Albanian language (total number of pages: 417). Data analysis on Albanian transcripts was carried out by the first author (MS) and reviewed by the co-authors (NM, EH) for reliability and validation, based on the quality criteria defined by [Mruck](#)

and [Mey \(2000\)](#). Quantitative data from the online survey were analysed in SPSS software, version 25 ([George and Mallery, 2019](#)). Qualitative data were analysed using content analysis, according to [Kuckartz \(2018\)](#) to identify categories, evaluate themes, and prepare information for the decision-making workshops and web-calls. The software application MAXQDA 2018 ([Rädiker and Kuckartz, 2019](#)) was used for coding, summarising, and checking statistical inter-rater reliability.

## 3. Results

Four main results from our formative research served as the basis of the deep structure cultural adaptation of Hap-pas-Hapi: i) The five key idioms of distress in Albanian language (“vuajtje”, “mërzi”, “brenjë”, “frikë”, and “nervozë”) that were described as “zinxhirore” (chain-like); ii) the fact that participants did not differentiate between causes and symptoms; iii) the fatalistic assumption that suffering is given by fate or by God, that suffering has to be endured (“durim”) and that it cannot be changed; and iv) the insight that suffering concerns the interdependent (or socio-centric) self, not only the individual.

The following section describes how these findings were integrated into the deep structure adaptation. Adaptations are described along the elements of [Heim and Kohrt's \(2019\)](#) framework of cultural adaptation, i.e., specific and non-specific treatment components, techniques, and treatment delivery. [Table 2](#) provides an overview of the deep structure adaptations of Hap-pas-Hapi.

### 3.1. Specific components

In the first round of FGDs, the story was found to be too long, too generic and the translation was considered linguistically deficient (FG:  $n = 3$ ). In the second round, feedback on deep structure adaptations was mainly positive in terms of relevance and acceptance: “It is ideal for someone who speaks the Albanian language.”; “The context and the concept are very good.”; “The programme is valuable and important.” (FG:  $n = 7$ ). Therefore, the specific components of the original intervention (i.e., behavioural activation, stress management, cognitive restructuring, social support, and relapse prevention), were not modified. However, evidence from FGDs reflected concerns about the acceptability of stress management techniques among elderly users. It was discussed that “meditation” as a practice to ease stress is not part of traditional Albanian healing methods. Nevertheless, participants assumed that an appropriate description and rationale could increase acceptance, e.g., that this technique is evidence-based and effective

across different cultural groups (FG:  $n = 5$ ). Traditional Albanian healing methods were not explicitly integrated as an additional component in the intervention because the participants have hardly raised them in formative research. Solely handicrafts or gardening were mentioned by one FG participant. In addition to the proposed components of stress management (breathing exercise and grounding technique), users are free to register and use their native healing methods in the Explanatory Model Builder (that will be described in the upcoming section) in order to carry out these activities and monitored by interactive calendar planning tool.

### 3.2. Non-specific components

The main focus of the deep structure adaptation of Hap-pas-Hapi was the modification of the non-specific components. The literature search had revealed only one study by Reich et al. (2019), who had developed an internet-based intervention for reducing fatalistic beliefs and increasing motivation for psychotherapy. The authors had tested the intervention in a pilot study with promising results. Following our request, the authors kindly shared the content of their intervention, based on which a new treatment component for the deep structure adaptation of Hap-pas-Hapi was developed. This new component, called “explanatory model builder”, aims to provide a convincing treatment rationale at start of the intervention. It helps users to disentangle causes from symptoms, and to better understand how behaviour and mood are connected.

#### 3.2.1. Symptoms and causes of distress

In the deep structure adaptation of Hap-pas-Hapi, the most salient idioms of distress gathered through the formative research were integrated into new symptom narratives of the illustrated story. In the adapted version, users first read these new symptom narratives and are then asked by the virtual doctor to list their own symptoms. They can either choose from a list which contains cultural concepts of distress such as “mërzi”, “brenjë”, or “nervozë”, or they can list own symptoms. In a second step, the narrator tells how it all started and provides a narrative on causes of symptoms that was developed based on the formative research, as well (e.g., focusing on post-migration living difficulties and referring to fate and endurance). Thereafter, users are asked to list what they think caused their symptoms. Again, they can pick from a list containing causes that are typical for the target group, including fate, or they can write down their own assumed causes. Based on this exercise, the virtual doctor explains that there is a difference between what *causes* the suffering and what *symptoms* emerge as a consequence.

In the FGDs, over 20 symptoms and causes of distress were compiled and discussed, and participants highlighted that such symptoms and causes differ depending on age, gender and personal migrations history (FG:  $n = 7$ ). For elder participants, the desire to return to the home country seems to be an important issue, although the general opinion recognizes that return is unlikely (mainly because the descendants would not go back with their parents). A further important cause of distress is unfulfilled desires (expressed by the metaphor “point in the heart”), i.e. the lack of wealth in retirement as a result of the social decline that has followed migration. By contrast, younger adults suffer from social pressure to achieve higher education, fulfilling jobs, and marriage (preferably to someone within the same ethnic group). In addition, both age and gender groups mentioned discrimination (especially in labour market), difficulties in cultural belonging (“foreigners here and there”), and incongruent values between parents and children as potential causes of distress.

As over 20 different symptoms and causes were mentioned, we conducted an online survey among participants of the FGDs. They were asked to rank the five most salient symptoms and causes of distress for both gender and two age groups. Tables 3 and 4 present the five symptoms and causes of distress than were ranked highest by

participants.

The top five symptoms and causes were then integrated into the narrator's story. The new narratives were written directly in the Albanian language, with the aim of staying as close as possible to the original illness narratives and idioms of distress that emerged in the formative research. For example, the chain-like description of symptoms has been adopted as follows: “The symptoms were often chain-like; when I was fatigued [Albanian, ‘e/i lodhur’], my sadness [Albanian, ‘mërzi’] increased, when I was sad, my fatigue increased.” (introductory session, symptom narrative). Causes of distress were addressed by new narratives for the four characters (male/female and married/unmarried). Also, key informants at beta-testing ( $n = 8$ ) found the adapted examples acceptable and identified well with the story. “This has been necessary for a long time. It is good that Albanians are sensitized to these issues and that they understand that they have to take certain things into their own hands.” (KI: pot. user, female, 35 years).

Both, FGDs participants and KI mentioned that the app became more personal and welcoming to them, and that they felt understood and less likely to feel alone with distress: “The stories show that you are not alone, but that there are others who are going through similar experiences.” (FG: E7, female, 36 years).

#### 3.2.2. Addressing fatalistic beliefs

As described in the ethnopsychological study (Shala et al., 2020), “fati” in Albanian culture is not primarily a religious term or spiritual belief but rather a culturally shared attitude for life that is embedded and influenced by socio-cultural elements. These findings were confirmed in the FGDs ( $n = 7$ ). The perception of suffering determined by fate that has to be endured (“durim”) was associated with hopelessness and reduced expectation of change. Further, we received recommendations for the cautious use of religious content, since Albanian culture is more oriented towards national identities than towards religion, which is multifarious. Against this background, we understand and address the concept “durim” independently of religious convictions and spiritual beliefs.

In the deep structure adaptation, it seemed essential to address fatalistic beliefs at start of the intervention to enhance treatment motivation (see Maercker et al., 2019). To create positive expectancy, we followed Hinton and Patel's (2017) recommendation to use culturally specific metaphors, proverbs, stories, and analogies. In the adapted story, the narrator now emphasizes that one can achieve positive changes by taking destiny into one's hand: “I did not think there was any chance to improve the situation. I thought I would have to endure this situation forever. But as a wise saying goes: ‘Endurance also has its limits’” (session 1, causes narrative). The ending part of this narrative indicates an Albanian proverb that is linked to hope. This modification was evaluated positively in FGD ( $n = 7$ ), as participants seemed to have people in their family who would express such fatalistic beliefs. The virtual doctor then summarises: “Some people also think that their symptoms are caused by bad luck, fate, or God's will, and they have to endure it.” (session 1, causes narrative). This is followed by an explanation that there are strategies that can help people feel better, and that Hap-pas-Hapi aims to provide these strategies to the user.

#### 3.2.3. Explaining the link between behaviour and mood

The story continues with a narrative of how different activities made the narrator feel better or worse, regardless of the original problem(s) that had caused the symptoms. Thereafter, participants are invited to write down their assumptions about what makes them feel better and what leads to worsening the symptoms. The four aspects – 1) symptoms, 2) causes, and activities that make one feel 3) better or 4) worse – are then summarised in the final explanatory model (see Fig. 1). This model aims to visually emphasise the rationale of Hap-pas-Hapi through the technique of “guided discovery”, a well-known technique in psychotherapy (Overholser, 2011).

**Table 3**  
Top 5 symptom-ranking per character.

Rating	Character			
	Drita	Artan	Blerta	Alban
1	<i>lodhje</i> (fatigue)	<i>demotivim</i> (demotivation)	<i>frikë</i> (fear, anxiety)	<i>stres</i> (stress)
2	<i>izolim</i> (isolation)	<i>stres</i> (stress)	<i>stres</i> (stress)	<i>brenjë</i> (worries, care)
3	<i>stres</i> (stress)	<i>mungesa e shpresës</i> (hopelessness)	<i>brenjë</i> (worries, care)	<i>nervozë</i> (agitation nervousness)
4	<i>mërzi</i> (sorrow, grief, sadness)	<i>brenjë</i> (worries, care)	<i>nervozë</i> (agitation nervousness)	<i>agresion</i> (aggression)
5	<i>brenjë</i> (worries, care)	<i>humor i ulët</i> (low mood)	<i>mërzi</i> (sorrow, grief, sadness)	<i>frikë</i> (fear, anxiety)

In the FGDs the “explanatory model builder” was well received ( $n = 7$ ). The examples were considered to be realistic, and the fact that one can add their examples was highly valued. Mainly it was described as an excellent opportunity to help the user to reflect and deal with their own situation. Participants also reasoned that it would be essential to explain that this programme has helped many people: “The goal of the app is to convey that it is not a bad thing to seek help, there is no shame in seeking professional help” (FG: E11, female, 50 years).

Results of the key informant interviews reflect in a broad sense those of the ethnopsychological study (Shala et al., 2020) and those of FGDs. In particular, age-specific differences became once again evident. The adapted version seemed to increase the interest especially of older participants, because they identified strongly with the story of the characters and therefore felt understood and more visible. They found it stimulating to get an insight into the topic of emotional distress and to be sensitized through psychoeducation.

### 3.3. In-session techniques

#### 3.3.1. Goal setting and involving a person of trust

To further enhance treatment motivation, we also added a goal setting component to the intervention. In the goal setting task, which was inspired by Reich et al. (2019), the user is first asked about possible negative consequences of their symptoms, e.g., fighting with family members or not being able to work. The illustrated doctor then explains that such negative consequences are common, and users are asked to set their own goals within the areas of family, household, work, leisure time, and others. With this goal setting task, we aimed to address the socio-centric self-concept in the target population. In this context, it seemed important to take into account possible consequences in the family and community that might be more relevant for participants than their own, individual suffering. Having these thoughts in mind, new narratives for the goal setting task were written to express age- and gender-appropriate treatment goals that addressed not only the individual needs of the main character but also their families and friends. For example, suggested goals for the character Drita (female, married, with two children) would be: “i) I want to be able to be there for my family. ii) I want to meet my friends for coffee again, iii) I would like to do sports with my friends again” (session 1, goal-setting exercise).

Participants confirmed the importance of the social environment for the user in the process of treatment and recommended the involvement of a person of trust (FG:  $n = 5$ , KI:  $n = 3$ ). Based on that, we added a

**Table 4**  
Top 5 causes-ranking per character.

Rating	Character			
	Drita	Artan	Blerta	Alban
1	Problems in the family	Financial problems	Problems in the family	Problems in the family
2	Generational conflict	Employment situation	Generational conflict	Integration
3	Employment situation,	Problems in the family	Employment situation	Withdrawal from society
4	Physical (chronic) pain	Loss of status in the immigrated country	Withdrawal from society	Generational conflict
5	Withdrawal from society	Language/communication	Education	Employment situation

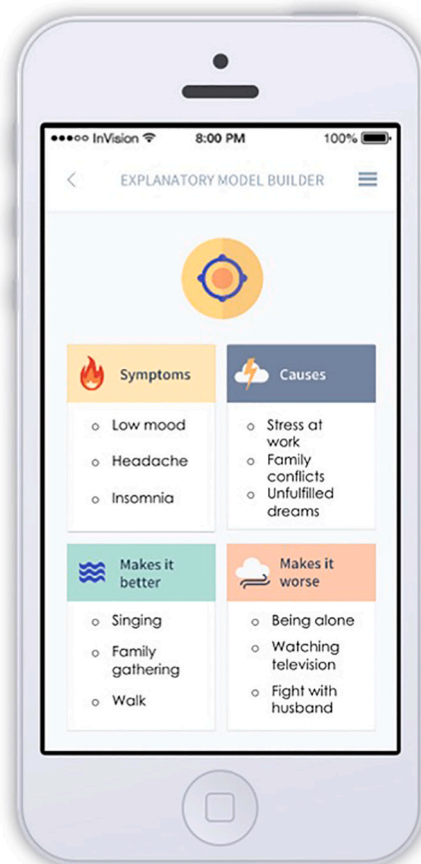


Fig. 1. Explanatory model builder.

small task, in which users are asked whether they would like to share their experiences of Hap-pas-Hapi with another person. They can write down the name of a person they trust, e.g. a family member or a friend, and integrate Hap-pas-Hapi into their lives.

All changes to treatment components were done in the introduction and in session 1, no significant adjustments were made in the subsequent narratives. In these later sessions, minimal adjustments were made with regard to the story content.



### 3.4. Treatment delivery

The deep structure adaptation uses the same delivery format (self-help provided through an app) as the original Step-by-Step programme. As to the original support model, we decided to use the contact-on-demand version that was developed for the STRENGTHS trials (see above). Participants of FGDs and KI interviews considered this as an innovative format, which was new to them, as a promising opportunity concerning barriers in mental health care: “The app has the potential to break down barriers, as mental health is still difficult in the Albanian population” (FG: E5, female, 28 years). With regard to treatment delivery, several surface adaptations were made concerning language, illustrations, migrations-specific content, and technical issues.

#### 3.4.1. Language

Improving the quality and acceptability of the translation was an intensive and time-consuming process. It was essential to involve several Albanian-speaking (non-) mental health experts and to get FGDs' feedback on the comprehensibility of the content. The vast majority of participants in the FGDs and KI interviews perceived the translated story as highly appropriate, culturally relevant, and interesting. Illiteracy was not mentioned as a barrier in any FGD. It was suggested to find a language that speaks to people with different levels of education. However, it was highlighted that second-generation migrants might have limited knowledge of Albanian language. Participants suggested offering the intervention in German-language, as well, or to include audio recordings, as the spoken language seems to be better understood than the written language.

In addition, regional differences in the Albanian language had to be deliberated. The idea of adapting the language to the spoken dialect had to be withdrawn since the main Albanian dialects, Gheg (mostly spoken in North-Albania, Kosovo, and North Macedonia) and Tosk (spoken in South-Albania), are too different from each other. Participants in FGDs recommended using the standard Albanian language but being cautious when it comes to the proper use of idioms of distress. For example, the word for “mood” in Albania is “humor”, whereas “disponim” is used in Kosovo and North Macedonia. Also, the idiom “trishtim” is understood as “shock” or “fright” in Kosovo, whereas in Albania, it means “sadness”. Based on the ethnopsychological study, the FGDs, and experts' reviews, we decided to use the word “mërzë” throughout the intervention, which was mentioned spontaneously by most participants for “low mood” and “sadness”.

Culture-specific metaphorical expressions were translated by adopting a suitable equivalent from the narratives that were gathered in the ethnopsychological study, or from suggestions by Albanian-speaking research team members. For example, the expression “My stomach was twisted with doubts” was translated into “por stomaku mu bë lëmsh nga dyshimet” (English, “but my stomach became a tangle of doubts”) (session 1).

#### 3.4.2. Illustrations

We decided to adapt the original Step-by-Step illustrations (Carswell et al., 2018) only minimally, as focus group participants considered them to be culturally appropriate in general. The suggested changes on the illustrations were largely based on the individual tastes of certain participants (e.g., the images could be less childish and more realistic, with more colours, different clothing style or show real persons). The possibility of adding religious markers to figures (veil for women, beard for men) was rejected by most participants, mainly because this would give preference to the Muslim religion but would exclude Christian or Orthodox believers. This also does not represent the contextual reality neither in Kosovo nor in Albania (Dow and Woolley, 2011). New illustrations were drawn only for the newly developed treatment components according to their content.

#### 3.4.3. Migration-specific content

In three FGDs, recommendations were made to adapt the exemplary activities in the story more to the living conditions in the migration context, in order not to evoke a stronger longing for family members in the homeland. For example, social activities with grandparents or aunts and uncles are often not possible if they live in another country or died during the war. The story and suggested activities were adapted accordingly.

#### 3.4.4. Technical issues

All participants stated that they had their own mobile phone, and nobody shared it within the family. They still welcomed the option to password-protect their access to the intervention. Problems with access to internet were not addressed by anyone.

## 4. Discussion

This study developed an empirical and theory-based methodology to culturally adapt an internet and mobile-based intervention for the treatment of psychological distress among Albanian migrants in Switzerland and Germany, named Hap-pas-Hapi. In addition, a transparent and replicable documentation of the adaptation procedures was developed, as several systematic reviews claimed that such documentation of cultural adaptation procedures is lacking in the literature (e.g., Harper Shehadeh et al., 2016; Kalibatseva and Leong, 2014; Pedersen et al., 2015).

The uncritical transfer of an intervention from one culture to another can not only reduce its effectiveness and usefulness but can also create risks to cause harm (Heim et al., 2018; Rogler, 1999). On the other hand, conducting ethnopsychological studies among many different cultural groups all over the world does not seem to be a realistic prospect. Heim et al. (2018) therefore recommend finding a balance to achieve the right level of cultural adaptation in large-scale interventions. More empirical evidence is needed on the substantial modifications that may enhance treatment adherence and effectiveness. To provide such empirical evidence, the present study describes the process of a deep structure adaptation (Resnicow et al., 1999) that will be compared to a surface adaptation in a randomized controlled trial (Heim et al., 2020).

Following the conceptual framework by Heim and Kohrt (2019), this study first examined the person perspective on the experience of psychological distress through an ethnopsychological study. Second, the intervention was adapted in an iterative process based on formative research (i.e., ethnopsychological study, focus group discussions, online survey, and key informant interviews). As most prominent adaptation, an explanatory model builder was developed, in which the treatment rationale is transmitted in a process of guided discovery. This explanatory model builder is expected to reduce fatalistic beliefs and to enhance treatment motivation. Third, two small interventions were included to address the socio-centric concept of the self in the target group. And fourth, adaptations were made with regard to treatment delivery and “surface”, i.e., language, illustrations, migration-specific content and technical issues. The specific components of the intervention (i.e., behavioural activation, stress management, cognitive restructuring, social support, and relapse prevention) remained unchanged. Our reporting system facilitated the decision-making process in a multicultural research team, the coherent and stringent monitoring of changes in the intervention, and transparent documentation.

#### 4.1. Person-centred cultural concepts of distress

As noted in the introduction, with regard to the heterogeneity of the target population, it should be kept in mind that cultural adaptation does not refer exclusively to ethnicity and nationality (Castro et al., 2010; Resnicow et al., 2000, 1999). In this study, cultural adaptation relates beyond ethnicity of Albanians, since our target group's culture

has heterogeneous characteristics. Our formative research emphasized the significance between acceptance of culturally adapted elements and socio-demographic factors such as age, gender, generation, experience of migration, language skills, belonging, economic class, or education, in addition to more cultural aspects such as acculturation, the self-concept or the social role in the community/family. Therefore, representatives of different subgroups were interviewed to learn more about the most salient symptoms and causes of distress that emerge in subgroups, and the ones that can be found independent of socio-demographic factors. Our formative research indicates that fatalistic beliefs, low treatment motivation and unfulfilled desires can be found mainly in older adults, and specific symptom expressions and perceived causes differ across age groups and gender (Shala et al., 2020). In contrast, there are shared narratives, independent of gender and age, concerning discrimination, difficulties in cultural belonging and incongruent values between the generations.

The newly developed explanatory model builder addresses such cultural concepts of distress, encourages users to reflect on their own situation, helps them to disentangle causes and symptoms of distress, and fosters their understanding of how behaviour and mood are related. The two newly added techniques, i.e., goal setting and the involvement of a person of trust, aim to address the socio-centric notion of the self in this target group. This was done based on our formative research showing that suffering and healing does not involve only the individual, but also the social environment.

#### 4.2. Treatment delivery and surface adaptation

Large parts of the adaptations were based on linguistic modification, and the question arose as to the difference between translation and adaptation. As mentioned in the [Methods and materials](#) section, we distinguish between techniques for literal translation and techniques for oblique translation, such as adaptation (Venuti, 2000). The adaptation technique is the methodological step where the work of the translator's overlap with the surface adaptation carried out by the research group. A deep understanding of the source and target language of the intervention was required from decision makers who carried out and approved the adaptation. First, general grammatical and stylistic edits were made but not documented (e.g., syntax, diacritics, flexions of words based on gender, person, tenses, formal personal pronoun etc.). Second, surface adaptation focused on semantics, notably including the use of metaphorical concepts, but also linguistic characteristics that refer to social practices (e.g., greetings formulas), and regional differences in the use of certain idioms.

The findings from this study add to the current literature on surface adaptation of the Step-by-Step intervention for different groups residing in Lebanon (Abi Ramia et al., 2018), Syrian refugees living in Germany, Sweden and Egypt (Burchert et al., 2019), and Filipino domestic workers living in Macao (Garabiles et al., 2019). With regard to language, we decided to stay closer to the standard language and not using spoken dialect, which differs from these previous studies. Similar to Arabic, Albanian language shows striking regional differences (Murati, 2015), and may display variations in the use of idioms of distress. Whereas the Arabic version of Step-by-Step uses the spoken dialect of the "Levantine" region (i.e., Syria, Lebanon, Palestine), Hap-pas-Hapi uses a language that can be understood by people from very different regions where Albanian is spoken. For this purpose, it was necessary to differentiate between terms that are used in active vocabulary (examined through FGDs) and the ones listed in dictionaries. In case of doubt or disagreement, we preferred the latter.

In contrast to previous studies on the cultural adaptation of Step-by-Step, no difficulties were anticipated in our target group with regard to access to internet or shared mobile phones.

However, our results also confirmed the previously found request for more realistic and less comic-like illustrations what were perceived as childish (Abi Ramia et al., 2018; Burchert et al., 2019).

#### 4.3. Lessons learned and suggestions for future research

As we have considered the new conceptual framework for cultural adaptation by Heim and Kohrt (2019) and developed a procedure with different methodological approaches, much valuable experience was gained during the study. In particular, we have found that it is worthwhile in the planning process to consider the focus of the study and the resources required for a deep and surface adaptation. The following questions and conditions should therefore be considered.

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##### Content modification:

- Which components should be adapted?
- Do parts of the content have to be newly written?
- Which language and which regional differences are considered in order to integrate proper idioms of distress, metaphors, and psychological terminology in the target language?
- What is the quality of the translation?
- Does the translation need a linguistic correction regarding semantics, syntax, and stylistics?

##### Translators, key informants, and decision-makers:

- Who translates the original story?
- Where do the translators come from?
- Who writes the new content?
- Who checks the translation and new content drafts through which methods? Which key informants should be invited to give feedback on comprehensibility and acceptance of the intervention?
- Should individual interviews or group interviews be conducted?
- What language and cultural knowledge do the decision-makers have?
- Are the suggested adaptations necessary because they concern comprehensibility and acceptance, or are the suggestions based on linguistic preferences of the decision-makers, which would be correct and appropriate anyway?
- How are decisions made and documented?
- Who incorporates the decisions into the intervention?

##### Documentation of formative research:

- Taking notes and protocols while conducting FGDs was useful, especially for faster data evaluation and analysis of main topics, as well as for the notation of content that could not be taken from the recordings (e.g., bodily reaction, pointing out).
- Organisation, implementation, and analysis of FGDs should be in relation to the research purpose and should be organised economically in terms of time.

##### Documentation of adaptation procedures:

- The more FGDs participants are invited, the more data must be processed, and the more suggestions for changes and topics must be considered.
  - The more drafts are written for the deep adaptation, the more revision loops are needed.
  - The more research members make decisions about the adaptation, the more effort is required in the change and documentation process because several circles are worked through.
- 

#### 4.4. Limitations

Some limitations of this study must be considered. Many interested persons could not participate in FGDs for occupational reasons, as not all FGDs could be conducted on weekends. Scheduling reasons also made it difficult to divide the groups into potential users/experts, elderly/young, or male/female. In general, we assume, that mixing the groups had no significant influence on results. However, the cultural norm of respect for the elderly sometimes made it difficult to interrupt them, both for the younger participants as well as for the moderator (MS). After the FGDs some younger participants expressed that they felt inhibited to express themselves freely in the presence of the elders. From our point of view, gender specific grouping was not absolutely necessary, as cultural norms allowed it. The participants in Berlin were mainly from Albania, while most of those in Zurich were of Kosovan origin. However, this indicated no major differences in their feedback.

Further, the results of the online survey could be influenced by the previously conducted FGDs. The sequence of options offered for the

ranking of symptoms and causes of distress was randomized; however, arbitrariness of answers could have influenced the results.

## 5. Conclusion

Research and practice are challenged to make psychological interventions available and acceptable to ethnic groups. Scalable e-mental health interventions seem promising to narrow the treatment gap. Literature recognizes the need to consider the patient perspective by culturally adapting evidence-based interventions to render them more congruent with patients' own explanatory models of their psychological distress.

Overall, the present work lays the groundwork for future research on deep structure cultural adaptation that acknowledges cultural concepts of distress. An iterative process and mixed methods approach can serve to successively identify the most salient elements and guide the transition from formative research to evidence-based cultural adaptation. In an upcoming randomized controlled trial, we will examine the effect of deep structure adaptation on the acceptability and effectiveness of Hap-pas-Hapi. Consequently, we aim to deliver much-needed empirical evidence on the effect of different levels of cultural adaptation.

## CRediT authorship contribution statement

MS and EH designed and conducted the study with support from NM, SB, ACP, and two Master students. AM and CK contributed to the design of the study. MS and one Master student analysed the data. MS conceptualized the manuscript and wrote the first draft. EH thoroughly edited the manuscript at several stages. All authors revised the manuscript before submission.

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## Compliance with ethical standards

All procedures performed in this study were in accordance with the ethical standards of the Swiss Federal Act on Research involving Human Beings and with the 1964 Helsinki declaration and its later amendments. The study was approved by the ethics committee of the Faculty of Arts and Social Sciences of the University of Zurich, Switzerland (Approval-Nr. 18.6.12).

## Informed consent

Informed consent was obtained from all individual participants included in the study.

## Declaration of competing interest

All authors declare that they have no conflict of interest.

## Appendix A. Supplementary data

Cultural adaptation monitoring sheets of session 0 (Introduction) and session 1. Further adaptation sheets on request. Supplementary data to this article can be found online at <https://doi.org/10.1016/j.invent.2020.100339>.

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