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Towards an Intersectional Approach in Competence Training and Clinical Practice

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Invitation

To the public defense
of my Phd thesis

**Depression and Diversity
in Turkish and Moroccan
Immigrant Populations**
Towards an Intersectional Approach
in Competence Training and
Clinical Practice

Tuesday
June 18th, 2019
13.30 p.m.
In the auditorium
of Tilburg University,
Cobbenhagen building,
Warandelaan 2,
Tilburg

After the defense,
you are kindly invited
to the reception
in the same building

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Gabriela A. Sempértegui

Depression and Diversity in Turkish and Moroccan Immigrant Populations:
Towards an Intersectional Approach in Competence Training and Clinical Practice

Proefschrift ter verkrijging van de graad van doctor
aan Tilburg University op gezag van prof. dr. G.M. Duijsters,
als tijdelijk waarnemer van de functie rector magnificus
en uit dien hoofde vervangend voorzitter van het College voor Promoties,
in het openbaar te verdedigen ten overstaan van een door het college voor promoties
aangewezen commissie in de Aula van de Universiteit
op dinsdag 18 juni 2019 om 13.30 uur

door

Gabriela Alejandra Sempértegui Vallejo

geboren te Quito, Ecuador.

Promotiecommissie

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    Prof. Dr. Annemieke van Straten
    Prof. Dr. Karien Stronks

Dedicado a mis padres, Eugenia y Leonardo, a mi Cleme y al Bolo

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General introduction

This dissertation focuses on mental health care for Turkish and Moroccan immigrant populations with depressive symptoms in Europe and specifically in the Netherlands. This dissertation also proposes an innovative diversity-oriented competence training for mental health providers (MHPs) that incorporates the intersectionality framework to attain better treatment outcomes and equity in access to and quality of mental health care. One of our main research questions is whether the proposed diversity-oriented competence training for MHPs is related to improved mental health care for Turkish and Moroccan patients with depressive symptoms in terms of their treatment outcomes. In order to resolve this question, this dissertation comprises two parts. The first part elaborates on the question: What is the state of the art in research on the prevalence, symptom manifestation, correlates of depressive symptoms, and treatment effectiveness for depression in Turkish and Moroccan immigrant populations? The second part of this dissertation builds forth on this knowledge and addresses the questions: What are the elements and what is the effectiveness, as reported by the therapists and the patients, of diversity-oriented training for working with Turkish and Moroccan immigrant patients with depressive symptoms?

In this chapter, I review the significant amount of work that has already been conducted by other researchers on the consequences of migration (of Turkish and Moroccan populations), depressive disorders, obstacles for treatment and solutions for inequity in mental health care. I first introduce relevant aspects of the provision of mental health care to immigrant populations in general. Then, I specifically address the implications for the manifestation and treatment of depressive disorders. Subsequently, I present the methods and concepts that have been used to achieve equity in mental health care and their limitations, paying particular attention to the concepts of diversity and intersectionality. Later, I introduce our target groups, Turkish and Moroccan immigrant populations, framing their history in the political and social context that interacts with their individual characteristics to determine their social position and (mental health care) needs. Finally, I present the objectives of this dissertation and the content of each chapter aimed at answering our research questions.

Migration and Vulnerability of Immigrant and Ethnic Populations

Ethnic populations are groups of people that share aspects such as culture, ancestry and history that define the group and individual identity (i.e., ethnicity; Bhopal, 2004; Bulmer, 1996; Jenkins, 2002). The term 'ethnic minority' is commonly used in relation to ethnic populations with different ethnic origin than the mainstream population, often due to an immigrant history or background (Bhopal, 2004), and even though some ethnic minorities have become majorities in cities like Amsterdam and Brussels (Crul, 2016).

Immigrant populations are constituted by first- and second-generation immigrants. First-generation immigrants, also called 'foreign-born' individuals, are people who have migrated to another society than the one they were born in to further build their lives there. Second-generation immigrants live in the country in which they were born, but either one or both of their parents were born in a foreign country (CBS, 2013; Villaverde, 2011). Within the first-

generation immigrant population, one may categorize people based on migration motivation. There are people who migrated driven by pull factors, such as better work opportunities (labor migrants), and others who migrated driven by push factors, such as fleeing from political persecution or war (Krishnakumar & Indumathi, 2014). Asylum-seekers, refugees and undocumented immigrants are included in this second group and constitute a group of its own kind, different than labor and other immigrant populations, due to their more disadvantaged socioeconomic position in the receiving society (Eurostat, 2011; UNHCR, 2016). Due to this distinction, we will not address the mental health status of asylum-seekers, refugees and undocumented immigrants in the current dissertation.

In this dissertation, we will mainly focus on the "immigrant populations". We will use this term consistently to refer to the group of first- and second-generation immigrants because most of the population and clinical registers in the EU-countries do not allow to recognize third or fourth generations (Lindert, Schouler-Ocak, Heinz, & Priebe, 2008; Rechel, Mladovsky, Ingleby, Mackenbach, & McKee, 2013). We will use the term "natives" to refer to nationals, who were born in the same country where both their parents were born. Additionally, we will refer to the society that is the target of immigration as the "receiving society", and to the society from which immigrants descend as the "original society", avoiding using the term "host" or "own" society that implicitly implies temporality and alienation. Also, the latter terms do not apply to ethnic minority individuals born in the receiving society. With these terms we imply for no means that these groups are homogenous; if anything, the complexity and diversity of these groups is what will be discussed in the following sections of this dissertation.

Despite the fact that migration often occurs as an attempt to improve the individual and/or family quality of life, empirical data, stemming from Europe in particular (Jurado et al., 2017), associate migration and an immigrant status to increased risk of mental health problems (Bhugra et al., 2014; Jurado et al., 2017; Rechel et al., 2013). There are many reasons why scholars associate migration to diminished well-being. First of all, migration implies a major life change that, depending on the purpose, might be temporary, semi-permanent or permanent (Bhugra, 2005). The change of place of residence also often implies a loss of a well-known lifestyle, status, a social network, customs, and the daily use of one's familiar language, all in exchange for an often unstable position in a new society (Carta, Bernal, Hardoy, & Haro-Abad, 2005). Second, societal hardship is often associated with the immigrant status (Bhugra, 2005), especially for labor and undocumented immigrants, refugees and asylum-seekers. Immigrants are overrepresented in unemployed or discriminated populations or marginalized environments (Bhugra, 2005; Lindert et al., 2008), which hinders social upward mobility and is related to minority stress (i.e., strain that is experienced by members of stigmatized groups; Huang & Zane, 2016) or social defeat - (i.e., the adverse experience of being socially excluded; Hollis & Kabbaj, 2014; Selten, van der Ven, Rutten, & Cantor-Graae, 2013). Third, diminished well-being has also been associated to the acculturation process, which comprises all the individual and societal factors and experiences involved in the adaptation of ethnocultural groups to the receiving society (and vice versa) following

migration (Berry, 1997, 2005; Bhugra, 2005), and the integration of multiple cultural identities (Carpentier & de la Sablonnière, 2013). In a cultural melting pot, collectivistic or interdependent mentality ('we' consciousness) encounters individualistic or independent mentality ('I' consciousness) of either immigrants or natives (Bhugra, 2005). Acculturation stress can arise when one's mentality differs greatly from the receiving community, but also from the original ethnic group (Bhugra et al., 2014). For instance, maintaining close social ties with the community can be experienced as an asset by some immigrants, but as restrictive by others, risking isolation, discrimination or stigmatization from the inner group if immigrants deviate from the accepted norm (MThomson & Crul, 2007).

Due to the aforementioned factors threatening well-being, immigrants are considered vulnerable populations for mental disorders (Lindert et al., 2008). The prevalence rates of psychological disorders vary greatly between and within ethnic groups and depend on the clinical disorder (Bhugra, 2005; Lindert et al., 2008). For instance, schizophrenia rates are in particular high among older Caribbean immigrants in the UK, and psychotic disorders are highly prevalent among Moroccan, Surinamese, and Caribbean Europeans (Bourque, van der Ven, & Malla, 2011), and also Norwegian groups that migrated to America (Bhugra et al., 2014; Lindert et al., 2008). Also, posttraumatic stress disorder and mood disorders are common among refugees (Carta et al., 2005) and certain immigrant populations (Bhugra et al., 2014).

Depressive Disorders in Immigrant and Ethnic Populations

With more than 300 million people suffering from depression, the epidemic of depression is an issue of public health worldwide (WHO, 2017). Figures indicate that the average 1-year prevalence of major depression in both high-income as low-income countries is 5.7% (range 2.2-10.4%), with a great share of people experiencing a chronic or recurrent course of illness (dysthymia or persistent depressive disorder in the DSM-5; Kessler & Bromet, 2013). Figures also suggest that immigrants are at particular risk of developing depressive disorders (Ladin & Reinhold, 2013; Levecque & Van Rossem, 2015; Tarricone et al., 2012), and that in many countries the prevalence rates of immigrants are higher than those of the natives are (Ladin & Reinhold, 2013; Missinne & Bracke, 2012). However, there are many differences in prevalence rates across ethnic groups and receiving societies. These differences are related to other contextual factors or aspects of diversity additional to or interacting with race/ethnicity, such as age (Ladin & Reinhold, 2013), acculturation, immigrant generation (Levecque & Van Rossem, 2015), socioeconomic status (Missinne & Bracke, 2012), social support (Lindert et al., 2008), illness severity (Maura & Weisman de Mamani, 2017), barriers to socioeconomic integration, or discrimination (Levecque & Van Rossem, 2015).

Despite scarce availability of data on service use and treatment outcomes (Kluge et al., 2012), there are reports that, in spite of often higher prevalence of depressive and other disorders, immigrants are underrepresented in mental health care services and make less use of care compared with their native counterparts(Chen & Vargas-Bustamante, 2011; Derr, 2016; Huang & Zane, 2016; Kirmayer et al., 2007; Lindert et al., 2008). Furthermore, treatment

adherence and providing adequate care to these populations have also been appointed as problematic (Giacco, Matanov, & Priebe, 2014; Lindert et al., 2008).

Challenges in the Provision of Mental Health Care to Immigrant Populations

Among barriers that immigrants (in particular those with an undocumented status) face to access mental health care, are the high costs of care, and their insecure legal situation (Chen & Vargas-Bustamante, 2011; Lindert et al., 2008; Rechel et al., 2013). There are also communication and language barriers, unfamiliarity with the mental health care system and with treatment options (low health literacy), the fear of stigmatization within their community or the experience of (institutional) discrimination (Carta et al., 2005; Giacco et al., 2014; Lindert et al., 2008; Rechel et al., 2013). Furthermore, mental illness beliefs, explanatory models, and idioms of distress (cultural expression and manifestation of psychological problems) are shaped by ethnocultural factors (Kleinman, 1980; White, 2015), which often prevail even after a long stay in the receiving society (Bhugra, 2005). Illness concepts and beliefs, which refer to a person's ideas regarding the definition, cause and prognosis of an illness, shape attitudes toward mental health care and behaviors like coping and help-seeking (Giacco et al., 2014; Huang & Zane, 2016; Kleinman, 1980; Lindert et al., 2008; White, 2015).

Once in treatment for mental health problems, language and communication barriers are also reported by immigrant patients (as well as by MHPs) as troublesome and hindering therapeutic alliance, diagnostics and treatment (Huang & Zane, 2016; Priebe et al., 2011). In addition, these barriers demand more time and flexibility from the institutions, which is usually an additional obstacle (Priebe et al., 2011). Interpreter services are often costly, not covered by social or individual insurance systems, or unavailable (Kluge et al., 2012; Priebe et al., 2011). In the interaction between immigrants and MHPs, the ethnocultural and other diversity aspects of MHPs (e.g., age, religion, sex/gender, etc.) must also be considered (Bhugra et al., 2014; Lindert et al., 2008). Using collectivistic approaches during treatment (e.g., collaborating with the patient's family) when one has been brought up with an individualistic mentality -or the other way around- might be challenging for some MHPs (Lehti, Hammarstrom, & Mattsson, 2009; Priebe et al., 2011). Diagnostic problems have also sometimes been reported among immigrant groups, due to difficulties of MHPs grasping differing idioms of distress, illness explanatory models, or differentiating culture-related behavior from pathology (Carta et al., 2005; Sandhu et al., 2013). Also, microaggressions, which are expressions of intentional or unintentional stereotyping, devaluation, or insensitivity to the immigrant status and migration-related issues patients bring in, have been found to negatively influence the therapeutic alliance as well as treatment satisfaction, adherence, and outcomes (Owen et al., 2011; D. W. Sue et al., 2007). Developing trust has been mentioned as a challenge working with immigrant populations (Sandhu et al., 2013), who are more likely than natives to drop out from treatment when not experiencing a connection with their therapist (de Haan, Boon, de Jong, & Vermeiren, 2018; E. Ward, 2007).

Additional Specific Challenges Working with Immigrant Populations with Depression

Besides the challenges that immigrant populations and MHPs encounter regarding access and provision of mental health care in general, there are some specific challenges related to working with immigrants with depressive disorders. For instance, there is a tendency to under-diagnose depression among immigrant populations, (especially in primary care; Ahmed & Bhugra, 2007), plausibly due to the following factors.

Before or during their migration and acculturation process, immigrants may endure many, sometimes consecutive, experiences of loss (including that of their loved ones). Due to, among others, different symptom manifestation, the distinction between hopelessness, normal grief, bereavement-related grief, persistent complex bereavement disorder and depressive disorder might be even more challenging than it already is in native, majority populations (Lehti et al., 2009; Pies, 2014). Also more in general, depression may not be recognized as an illness or disorder, or there are no specific words for it in certain cultures (Lehti et al., 2009). Additionally, default classification systems (ICD-10, DSM-IV, DSM 5) or standard instruments measuring depressive disorders depart from Western illness models, leaving little room for specific idioms of distress or for somatic symptoms other than change in appetite, weight, or sleeping problems (Ahmed & Bhugra, 2007; Haroz et al., 2016). Additionally, focusing on the therapy of depressive disorders, the treatment with Cognitive Behavioral Therapy (CBT), which departs from the theory that depression is related to negative cognitions about oneself, others, the world and the future, might need some adaptations to include for instance a collective mentality or a changing identity related to the acculturation process (Bhugra & Ayonrinde, 2004). Also, as antidepressants are one of the first-line treatment options for depression, the biological make-up of various race/ethnic groups should be considered (e.g., Bhugra et al., 2014; Schraufnagel, Wagner, Miranda, & Roy-Byrne, 2006). See for more information on this matter www.ethnopsychopharmacology.com.

Even though there is increasing evidence that the most commonly studied types of psychotherapies are effective to reduce depressive symptoms (Cuijpers, 2017), immigrant populations seem less likely than native groups to receive depression treatment according to the available guidelines (Fassaert, Nielen, et al., 2010; Schraufnagel et al., 2006). Furthermore, research on the (comparative) effectivity of these therapies among immigrants is still deficient, as it is still scarce and often focuses on more acculturated subgroups of ethnic minorities (Huang & Zane, 2016; Ünlü Ince, Riper, van 't Hof, & Cuijpers, 2014). Immigrants are also generally underrepresented in treatment samples, due to the social barriers they face to access health care (Lindert et al., 2008), and many clinical trials do not include ethnic minorities at all and/or exclude subgroups due to illiteracy or poor language proficiency (Horrell, 2008; Huang & Zane, 2016). Also, much of the evidence stems from US studies, in which it is a common practice to analyze large, general racial/ethnocultural groups, instead of specific subgroups (Maura & Weisman de Mamani, 2017).

Considering the aforementioned complexities, some studies have found that MHPs face many insecurities and challenges when providing mental health care to immigrant populations

(Lindert et al., 2008; Priebe et al., 2011; Sandhu et al., 2013). Authors and MHPs have pleaded that specific training is needed for MHPs to help them developing cultural competence and to acknowledge and respond better to the particular needs and expectations of specific immigrant populations (Carta et al., 2005; Huang & Zane, 2016; Priebe et al., 2011; Sandhu et al., 2013). When MHPs succeed creating a positive therapeutic alliance early on with their immigrant patients, this can act as a protective factor for unintentional microaggressions, and other ruptures of the therapeutic relationship (Owen et al., 2011).

Cultural Competence on Three Levels
Three widespread theoretical and clinical frameworks have been developed in face of the mentioned complexities and inequalities in the mental health care for immigrant populations (Huey, Tilley, Jones, & Smith, 2014; Kirmayer, 2012). One focuses on treatment characteristics (e.g., culturally adapted treatments; S. Sue, Zane, Hall, & Berger, 2009). Another one primarily concerned therapist characteristics (e.g., therapist competences), which can also include therapeutic processes, such as the therapeutic relationship (S. Sue et al., 2009). The third focuses on processes at the institutional level to promote equity (Kirmayer, 2012; Kirmayer et al., 2012). Nevertheless, in practice, there is much overlap among these frameworks and they can complement each other (Huey et al., 2014; S. Sue et al., 2009).

The concept of 'cultural competence' is central to the frameworks focusing on therapist characteristics. Although there are different conceptualizations, cultural competence (also referred to as cross-cultural, intercultural, multicultural, cultural diversity competence; Knipscheer & Kleber, 2005b; D. W. Sue, Arredondo, & McDavis, 1992; D. W. Sue et al., 1982; S. Sue et al., 2009; Worthington, Soth-McNett, & Moreno, 2007) is mainly defined as: 'awareness of the impact of the clinician's own ethnocultural identity on patients; knowledge of the language and cultural background of groups seen in clinical practice and their interactions with mental health issues and treatment; the skills for working with particular groups; and the development of an organization or system that is capable of offering equity of access and outcome to diverse populations' (p.3; Kirmayer et al., 2012). Cultural competence is advocated as necessary for providing culturally adapted or culturally sensitive treatments (S. Sue, 1998).

In the last decades, cultural competence has been encouraged by institutions such as the American Psychological Association and training programs have been widely disseminated, especially in medical care (Lim, Luo, Suo, & Hales, 2008). Evaluations of these programs have rendered positive results in improving MHPs' competences (Horvat, Horey, Romios, & Kis-Rigo, 2014). However, the evidence that MHPs' cultural competency and cultural competency training is of added-value for the treatment outcomes of immigrant populations is still equivocal, also especially in the American mental health care (Huey et al., 2014). Though this is changing in recent years (Huey et al., 2014), funding agencies do not prioritize studies assessing mental-health care of immigrants (Rechel et al., 2013), which partly has led to only very few studies examining the effectiveness of initiatives and programs aimed at improving MHPs' competences to provide care and treatment outcomes among immigrant populations (Lie, Lee-Rey, Gomez,

Bereknyei, & Braddock, 2011; Rechel et al., 2013). Furthermore, the awareness that cultural categories are not homogenous or static, but heterogeneous, dynamic and highly interrelated and interacting with other diversity aspects, is piercing the understanding of current research, pointing towards the inclusion of diversity (e.g., Betancourt, 2006; Good & Hannah, 2015; Knudsen, 2006; Neblett Jr, Bernard, & Banks, 2016; Sears, 2012; Stevens, Clycq, Timmerman, & Van Houtte, 2011).

From Cultural to Diversity Competence

Nowadays, concepts such as "super-diversity" (Vertovec, 2007) or "hyperdiversity" (Hannah, 2011) have gained space in scholars' vocabularies, areas of study, and in public health and policy-making organizations worldwide (Meissner, 2015). These concepts point out at the raising migration movements and the increasing diversity in population composition of cities and entire countries (Meissner, 2015; Vertovec, 2007). Speaking of super-diversity or hyperdiversity highlights the need of breaking with the traditional concept of culture or diversity only related to the discrete category of racial/ethnic membership. It also indicates the importance of considering other aspects of diversity (think of age, gender/sex, immigrant status, labor opportunities, etc.) when addressing issues related to immigrant and ethnic groups (Vertovec, 2007). These concepts also recognize the high within-group differences of people stemming from the same country, which includes among others different ethnicity, religious affiliations, region of origin, clan memberships, and languages (Vertovec, 2007).

Even though super-diversity acknowledges the within-groups differences shaped by other aspects of diversity, this concept does still put much weight on the ethnic/racial classification as the primary unit of analysis, and hardly considers the influence of context (Crul, 2016). Therefore, the intersectionality theory and the integration of context in analyses are also gaining attention in the analyses of mental health (care) disparities and the efforts to close the extant gaps (Bekker et al., 2005; Ingleby, 2012; Kapilashrami, Hill, & Meer, 2015; Van Mens-Verhulst & Radtke, 2006). The intersectionality theory is the product of the feminist movement that alerted the society of the increased societal challenges experienced by black women, above those experienced by sole women or sole black individuals (Crenshaw, 1989). This theory focuses on the dynamics between aspects of diversity (above their characteristics as separate categories), recognizing their complex interplay that determines the individual's social position (Bowleg, 2013; Davis, 2008; Kapilashrami et al., 2015; McCall, 2005).

Intersectionality also offers a cognitive framework to contemplate how social issues affect every member of a group, also those who fall in the gap between categories (Crenshaw, 2016). This is important since cognitive frames determine what information is saved and used, and one cannot start thinking of solutions for a problem that cannot be placed within a cognitive framework (Crenshaw, 2016). Following this thought, diversity competence offers a framework for MHPs, and is defined as the set of attitudes, knowledge, and skills that enables MHPs to integrate intersectionality in the analysis of their own identity, their patients' situation and needs, and their interaction (Sempértegui, Knipscheer, & Bekker, 2017). Diversity competence

also implies that MHPs are aware of the individual needs that can stem from interacting aspects of diversity (Bechtel & Ness, 2010; Sempértegui et al., 2017), they are aware of the influence that their own aspects of diversity might have in their therapeutic relationships (Celik, Abma, Klinge, & Widdershoven, 2012; Sempértegui et al., 2017). Furthermore, diversity competence refers to the ability to implement interventions that consider population-specific insight as well as individual needs related to aspects of diversity or contextual factors (Sempértegui et al., 2017; Van Mens-Verhulst, 2003).

The current body of research on inequality in -mental- health care has mainly overlooked the intersectional character of diversity (Kapilashrami et al., 2015) and therapist competence (Renzaho, Romios, Crock, & Sønderlund, 2013). Some authors have pointed out the necessity of studies disentangling general groups of immigrants (e.g., Asian Americans, Northeast Africans, second-generation European immigrants) into specific ethnocultural groups (Huang & Zane, 2016; Maura & Weisman de Mamani, 2017), thereby using an intersectional framework of analysis, so that -mental- health care can be better tailored to the specific needs of these subgroups (Green, Evans, & Subramanian, 2017; Kapilashrami et al., 2015).

The Target Groups of this Dissertation: Turkish and Moroccan Immigrant Populations

Two of the largest non-EU immigrant populations in European countries are the Turkish and Moroccan communities (Eurostat, 2011). Large Turkish immigrant and ethnic groups reside in Germany, Austria, the Netherlands, Belgium, Switzerland, Sweden, UK, and Denmark, making up 7.5% of the total foreign-born EU population; whereas Moroccan groups found their way mainly to Spain, Italy, France, Belgium, the Netherlands, Germany, and the UK, and represent 5.8% of the total immigrant population (Eurostat, 2011). Both groups migrated to Europe mainly as guest workers after World War II, mostly from underdeveloped rural areas, with little to no education, selected based on age, health and physical condition (van Amersfoort & van Niekerk, 2006; Villaverde, 2011). Despite European migration restraining legislation (Ladin & Reinhold, 2013), the composition on these initially male populations changed drastically from 1970's on (Lindert et al., 2008), when labor immigrants decided to stay permanently in the EU countries and brought their spouses and children for family reunification (Villaverde, 2011). At the same time, the economic crisis that affected textile and coal-mining industries left many of Turkish and Moroccan workers without jobs and dependent of the welfare systems of countries with restrictive migration policies (e.g., Germany, the Netherlands, Spain; Lindert et al., 2008) that only after the 1980's started to recognize themselves as countries with immigrant populations (van Amersfoort & van Niekerk, 2006).

There are authors who speak of a failed or at least problematic integration of Turkish- and Moroccan immigrant groups in Europe (Villaverde, 2011), whereas others are more positive about their integration process, especially regarding the second-generation (Crul, 2016; Crul & Vermeulen, 2003; M. Thomson & Crul, 2007). Even though the effects of legislation and social institutions on the integration of these groups differ per country, there are some common factors to be named (M. Thomson & Crul, 2007). Language barriers were from the beginning a cause of

isolation, especially for Turkish and Moroccan women. The school system played an important role (Crul, 2016). For instance, in Germany, where children are early classified into school tracks and parent involvement is more determinant of children school preparation and success; or in Spain, where there are fewer resources for schools and language courses, Turkish and Moroccan immigrants are at the bottom on the integration scale (also compared to other non-EU migrants; Crul, 2016; Villaverde, 2011). They display the lowest degree of completed education, the lowest income and a high rate of unemployment (the highest among first-generation women; Villaverde, 2011). They also occupy the most unstable, often harsh or physically demanding jobs, sometimes in undocumented status (Moroccan immigrants in particular; Villaverde, 2011). They are also overrepresented in socially deprived neighborhoods, where access to high-quality education and health care is more challenging (M. Thomson & Crul, 2007). However, in Sweden, where children can access preschool early, and homework and language preparation are done at school, men and women of Turkish descent are more often represented in academic tracks and in the labor market, and they more often marry with highly-educated, native-born people (Villaverde, 2011). Another common factor is that, in the recent years, the position of the Islam and of Muslim citizens in Europe has been increasingly frowned upon (Stevens et al., 2011). Events such as 9/11 in the US, the massive migration of Syrian refugees, and terrorist attacks by Islamic extremists in European cities have contributed negatively to the public opinion regarding Turkish and Moroccan groups (Nwabuzo & Schaeder, 2016; M. Thomson & Crul, 2007; Villaverde, 2011).

In the Netherlands, the Turkish and Moroccan immigrants differed from other newcomers form South-East Asian and Dutch Antilles because their initial socioeconomic situation was more deprived, and they did not share their linguistic and cultural past as the ex-colonies members did (Crul & Doomernik, 2003). Moroccan immigrants had mostly a Berber (Tamazight) background, came from central and north rural Morocco, and were often poorly educated (Crul & Doomernik, 2003). Turkish immigrants came from central and coastal Turkey and often enjoyed more years of education than their Moroccan counterparts did (Crul & Doomernik, 2003). Also, until 2015, there was a multicultural model of integration (Stevens et al., 2011) that subsidized (often conservative) governmental Turkish and Moroccan parties to organize education and religious needs of the Turkish- and Moroccan-Dutch citizens (Crul & Doomernik, 2003; Stevens et al., 2011). This type of legislation together with other national characteristics, such as the early selection of academic track at the beginning of junior high school (Stevens et al., 2011), have been associated with segregation of members of these groups (Özdil, 2012). In general, in the early 2000s, Turkish immigrants were perceived as "old-fashioned collectivists" (Benzakour, 2001) with strong ties to the Turkish culture, institutions and traditions and small visibility in the Dutch scene (Crul & Doomernik, 2003). Moroccan immigrants were in their turn "modern individualists" (Benzakour, 2001), with many second-generation, high-achieving women, and many young men involved in criminal activities (Crul & Doomernik, 2003).

Nowadays, analyses of a more intersectional kind show that, whereas the first-generation immigrants are more homogenously poorly educated and less economically active, the second

generation shows contrasting trends regarding integration (Crul, 2016; IMISCOE, 2008). Younger second-generation individuals show higher post-secondary educational attainment (76% of Turkish, 80% of Moroccan people; Crul, 2016), and are more often part of upward social trends, such as adopting modern gender roles and marrying highly educated partners, outside their ethnic groups (Crul & Doomernik, 2003; IMISCOE, 2008). Moroccan women are a salient example of the latter (IMISCOE, 2008). On the other hand, older, second-generation individuals display a high rate of early school leavers, who often repeat patterns of the first generation (e.g., intra-ethnic and intra-class marriage, traditional gender roles, reliance on welfare, deprived social environment) which relates to downward social mobility (Crul, 2016). Turkish second-generation women are more representative of the latter (IMISCOE, 2008).

Aims of this Dissertation

In this dissertation, we are interested in two topics that we will link to each other in the following chapters. On the one hand, we aim to gain a more in-depth insight about the mental health status and the received mental health care of Turkish and Moroccan immigrant populations with depressive disorders in Europe, with a special focus on the Netherlands. Turkish and Moroccan immigrant populations are among the largest immigrant communities in Europe (Eurostat, 2011), but their integration has not been without problems. Even though the EU has now adopted an integrational model that strives for mutual adaptation of immigrant and national populations on cultural, social and political aspects (Commission of the European Communities, 2005, 2011), large differences in integration policy (application) still remain among member states (OECD/EU, 2015). In the years prior to the start of this research, and still nowadays, Turkish and Moroccan groups have been the center of increased negative media attention (van Klingeren, Boomgaarden, Vliegenthart, & de Vreese, 2015), showcasing the high discrimination, and social pressure they are exposed to. Furthermore, there have been indications that among these groups the prevalence rates of depression (van der Wurff et al., 2004) and treatment dropout (Fassaert, Peen, et al., 2010) are high, emphasizing the need of getting to know these populations better, so measures can be taken to target their specific needs regarding mental health.

On the other hand, we are interested in the evaluation of MHP's competencies and in advancing the cross-cultural and clinical field that is switching from studying narrow cultural competence to wider diversity competence. This switch in the focus of competences is a response to the challenges MHPs face providing mental health care to immigrant populations and, more recently, to highly diverse groups, in which ethnicity might be only one of the several, interrelated determinants of mental health. The positive influence of training MHPs in cultural competence has become apparent in studies evaluating improvement of their (mostly self-reported) competences. However, as we have mentioned before, research examining the effects of cultural competence training on patients' clinical outcomes after treatment has been scarcely conducted. With this dissertation, we want to contribute to closing this gap and simultaneously integrate the diversity and intersectional focus to tailor mental health care for specific at-risk populations.

Hence, we aim at clarifying whether the development and implementation of a diversity-oriented competence training for MHP's, using the intersectionality framework, is related to better mental health care outcomes for immigrant populations. In this dissertation, given the current sketched situation of Turkish and Moroccan immigrant populations with depressive disorders and symptoms, we have made these two populations the target groups of our analyses, and we expect that our work provides insights that can be applied in clinical practice to benefit them and the mental health care they receive. Also, we aspire that these insights may have validity for, and may be generalized to, other immigrant and ethnic minority populations.

Overview of the Chapters

Below follows an overview of the subsequent chapters of this dissertation, which are based on separate papers that either have already been published or are currently being reviewed for publication purposes.

Chapter 2 presents the first part of a systematic review exploring the state of the art regarding the prevalence of depressive disorders and symptoms of Turkish and Moroccan immigrant populations in Europe. In this chapter, we also review the literature on positive and negative factors (correlates) related to the prevalence and severity of depression and we highlight the findings that manifest intersectionality in these populations. This chapter also presents a qualitative evaluation of the extant literature and offers evidence-informed recommendations for clinicians.

Chapter 3 is also a theoretical paper in which we portray the results of the second part of our systematic review. In this chapter, we first review the current findings on the symptomatic manifestation of depression in Turkish and Moroccan immigrant populations. We also discuss the reported effectiveness of depression treatments, and we report on the aspects that have been described as obstacles and facilitators for accessing treatment and for therapeutic success. Based on the qualitative evaluation of the literature, we finally present a set of implications for clinical practice. From both theoretical chapters, it become apparent that although Turkish and Moroccan immigrant groups share a history of labor migration and social hardship, each group showed own singularities regarding aspects of diversity, intersectionality and other aspects related to depression and depressive symptoms.

In Chapter 4, we investigate the comparative effectiveness of two current first-choice, evidence-based depression treatments: interpersonal psychotherapy (IPT) and cognitive behavioral therapy (CBT). We conducted a pilot, retrospective study to compare the adherence rates and practice-based, routinely collected outcome data of native, Turkish-, and Moroccan-Dutch outpatients with depressive symptoms. We compared the pre- and posttest levels of depression severity, psychological distress, quality of life, and client satisfaction of all the three groups, also taking diversity aspects besides ethnicity into account. This chapter informs us on the current effectiveness of standard (not culturally or otherwise adapted) evidence-based therapies for Turkish and Moroccan immigrant populations, which are groups that have not yet been examined in comparative research of these two therapies.

In the second section of this dissertation, we cover the development and evaluation of a diversity-oriented training for MHPs. In Chapter 5, we present the development of this training, for which we integrated a great part of the knowledge on depressive disorders of Turkish- and Moroccan immigrants populations reviewed in Chapters 2 and 3, with theories and knowledge on MHP's cultural and diversity competence and intersectionality. In this chapter, we also discuss the evaluation of the effectiveness of the training at the therapist-level. In other words, we examined whether receiving the training was associated to higher levels of therapists' self-reported diversity attitudes, skills, and knowledge, and better knowledge about the target populations at post-training and at three-month follow-up.

Chapter 6 focuses on the evaluations of the diversity-oriented competence training at the patient level. In a multi-centered, quasi-experimental study, we tested the hypothesis that patients of MHP's that received diversity-oriented competence training and supervision would be more satisfied with the treatment and consider their therapists more competent than would patients of control therapists do. We also examined whether patients in the diversity-oriented condition would differ from the control condition on non-adherence rates and on clinical outcomes, such as the reduction in depression severity, overall psychological distress and quality of life.

To conclude, in Chapter 7, we summarize the principal findings of the aforementioned studies and relate them to the research aims of this dissertation. In this final section, we will also reflect on the limitations of our research and on the possible implications of our findings for clinical practice, education and training, policy makers and future research.

Depression in Turkish and Moroccan immigrant groups in Europe: A systematic review of prevalence and correlates

Abstract

Objective

This review evaluates systematically the extant literature on prevalence and correlates of depressive disorders and symptoms of Turkish and Moroccan immigrant populations in Europe.

Method

We searched PsycINFO, MEDLINE, Science Direct, Web of Knowledge, and Cochrane databases (1970- 31 July 2017), and performed a qualitative evaluation and rating of the studies following established guidelines.

Results

Fourteen studies on prevalence and 30 on correlates (*n Turkish individuals* = 58,993; *n Moroccan individuals* = 81,758, *n natives* = 984,849) met inclusion criteria. The pooled one-month prevalence for Turkish immigrants was 3 to 4 times higher than those of native populations and some Moroccan immigrant populations. Among others, ethnicity and ethnic discrimination were salient, positive, independent correlates of depressive psychopathology. Ethnicity and ethnic discrimination were salient, positive, independent correlates of depressive psychopathology. There were mixed indications, depending on the study quality and the examined models, that female sex, low SES (unemployment) and single marital status were related to higher depressive psychopathology, especially for Turkish groups. Acculturation strategy (low maintenance- high participation) in Turkish- and religiousness in Moroccan populations were related to lower depressive psychopathology. Current gaps in literature are psychological correlates, sexual diversity, and second- and third-generation populations.

Conclusion

Turkish and Moroccan populations share a similar migration history, but differ in depression prevalence and correlates. Replication studies are necessary.

Introduction

Depression is a major public health priority. Globally, it is associated with chronic physical disorders, elevated risk of early death and serious functional impairments (Kessler & Bromet, 2013). Contrary to the idea in North America of the "healthy immigrant effect", in Canada and Europe there is the notion that immigrant populations are vulnerable to developing mental disorders such as depression (Bhugra, 2005; Kirmayer et al., 2011). In Europe, non-EU immigrants are at increased risk of depression (pooled relative risk of 1.21; 95% CI 1.04–1.40, p < 0.012; Missinne & Bracke, 2012; Tarricone et al., 2012).

The Turkish and Moroccan communities, with approximately 5,8 million and 4,1 million citizens, respectively, constitute nowadays two of the largest immigrant populations in Europe (Crul & Vermeulen, 2003; Eurostat, 2017). They are largely represented in countries such as France, Spain, and The Netherlands (CBS, 2016; INE, 2008; Insee, 2013). In recent years, the public concern in Europe about the impact of social problems on the mental health of Turkish and Moroccan immigrant populations and vice versa has increased. This concern has certainly been influenced by the migration crisis in Europe since 2015, in which support for far-right movements, anti-Islam, and anti-immigrant policies is raising (Nwabuzo & Schaeder, 2016).

The Case and Background of Turkish and Moroccan Immigrants in Europe

Turkish and Moroccan people, mostly men, migrated to Europe in the early 1960's when labor force was needed to support the rapidly growing nations. Spain and Italy became their immigration target between 1970 and 1980. Labor immigrants were considered temporary guests, and a large number repatriated after European countries stopped recruiting workers in 1973. Some, however, stayed permanently and brought their families (Münz & Fassmann, 2004).

At the time of labor migration, the political instability that sought to change the constitution in Morocco started, and it lasted until 1999, when King Mohammed VI was installed (Maghraoui, 2001). Since 2000, Morocco has moved towards acceptance of women's rights, a new constitution, and tighter commercial bonds with the European Union and USA (Miller, 2013). Turkey also saw political instability with several coups starting from 1960 on. Between 1983 and 2001, the political climate was relatively stable and there was room for women emancipation in the country. However, this period ended with a financial crisis in 2001 (Zürcher, 2017). Recep Tayyip Erdoğan has been a leading political figure of Turkey as Prime Minister since 2003 and as President of Turkey since 2014. His leadership has been characterized by authoritarianism, conservationism, and persecution of the opposition and the press, which has pushed several of his opponents to emigrate (Zürcher, 2017).

The reported prevalence rates of depressive disorders and symptoms of Turkish and Moroccan immigrant populations vary greatly. Some estimations place these two immigrant populations among the groups with the highest levels of depressive symptoms in Europe (Missinne & Bracke, 2012). However, a clear overview of the prevalence rates of depressive disorders and symptoms among Turkish and Moroccan immigrant populations is currently lacking.

Additionally, a recent review of the literature shows that the effectiveness of psychological treatments for depression in Turkish immigrant groups is weak (effectiveness for Moroccan groups has not been investigated yet; Sempértegui, Knipscheer, Baliatsas, & Bekker, 2019). There is also some evidence that Turkish and Moroccan patients in secondary care tend to receive less intense psychological treatment and to drop out more often of treatment than the native-born in the Netherlands, which has been partly related to gender, age, and illness characteristics (Fassaert, Peen, et al., 2010). Studies have also shown that treating immigrant populations with mental disorders is considered challenging by clinicians due to difficulties with diagnosis, developing trust and social adversity in these groups (Sandhu et al., 2013).

There are to date no systematic studies of correlates of depression in Turkish and Moroccan immigrant populations in Western Europe. Gaining insight about the factors that are associated with depressive symptoms might contribute to the understanding of what effective treatment for depression looks like for these groups.

Intersectional Approach to the Correlates of Mental Health of Immigrant Populations

A growing amount of research has focused on socio-demographic factors (e.g., lower socioeconomic status (SES), female gender, single marital status) of immigrant populations as determinants of higher levels of depression (Jurado et al., 2017; Levecque & Van Rossem, 2015). Psychological characteristics like external locus of control and fatalism beliefs have also been related to depression among immigrants (Bhugra & Ayonrinde, 2004). There has also been increasing research examining ethnocultural factors following the narrow definition of culture (including language or traditions, geographic origin, ethnicity, race; Kirmayer et al., 2012) as well as the broader definition considering social and political processes faced by ethnocultural groups (Kirmayer, 2012; Marsella & Yamada, 2000). Among non-EU immigrants, first generation, social marginalization, and ethnic discrimination have been associated with higher levels of depressive symptoms (Levecque & Van Rossem, 2015; Missinne & Bracke, 2012). Also, the political and economic climate of each receiving country influenced the degree of integration, success, and wellbeing of immigrant populations (Crul & Vermeulen, 2003; Lindert et al., 2008).

Nevertheless, not all non-EU immigrants show the same prevalence rates or share the same correlates of depression, which points out at the need of understanding how individual level factors, such as socio-demographic or psychological characteristics, and ethnocultural factors interact to contribute to mental health necessities of specific immigrant populations. Therefore, the intersectionality theory is gaining space in the research of mental health disparities and the efforts to achieve equity (Green et al., 2017; López & Gadsden, 2016). The intersectionality theory was introduced by Crenshaw (1989) through her analysis of the social position of Afro-American women. In this analysis, the social categories of race/ethnicity and sex/gender were not considered separately but were observed in their complex interplay (López & Gadsden, 2016). Intersectionality also pays attention to the power systems behind every social category (e.g., racism, sexism) and highlights the risk of higher health burden of individuals occupying multiple disadvantaged social positions (Kapilashrami et al., 2015).

The intersectionality approach was recently used to investigate the association between ethnic discrimination and common mental disorders amongst African American students attending a predominately White university in the USA (Neblett et al., 2016). The results showed that African American men with lower SES conditions and African American women with higher SES conditions were at higher risk of mental disorders (Neblett et al., 2016), highlighting the need of examining interactions between socio-demographic and ethnocultural factors to understand inequity and tailor mental health care.

Aims of the Review

The purpose of this paper is to synthesize and to critically examine the available knowledge on prevalence of depressive disorders and symptoms of Turkish and Moroccan immigrant populations in European countries and to describe their correlates. In this effort, we use an intersectional perspective, which in this review was operationalized as pointing out at the more vulnerable as well as resilient subgroups within these populations as given by the interplay of socio-demographic, psychological, and/or ethnocultural factors. We will address the following questions:

 a) What is the state of the art regarding the prevalence and correlates of depression or depressive disorders of Turkish and Moroccan immigrant populations in Europe?
 b) What is the quality of the extant research?

Additionally, based on the findings, we also formulate recommendations for clinical practice that might contribute to a better attunement of mental health care to these populations.

In this review, we refer to first- and second-generation immigrants as "immigrant populations". We use the term "native" to refer to all citizens born in the country of residence and whose both parents had also been born in the country of residence. The "native" group also includes third- and fourth-generation immigrants because none of the included studies made a distinction between first- and second generation and third and fourth generation due to the fact that country of birth (of the person and his/her parents) was the most commonly used identifier of migration status.

Method

Concepts and Definitions

Following the risk factors typology and identification methods of Jacobi and colleagues (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004), we decided to use in this review the term 'correlates' to refer to the variables or factors that showed a statistically significant association (positive or negative) with depressive symptomatology level or severity, stemming from single-subject, or between-groups, case-control, cross-sectional studies. Only in the case of longitudinal studies, we used the terms 'protective' or 'risk factor'. Following the categorization of another recent review on correlates (Jurado et al., 2017), we grouped the correlates into

psychological characteristics like personality dimensions or self-esteem, socio-demographic factors (sex, age, marital status, educational level, SES, disability), and ethnocultural factors including aspects closely related to migration and social context of the target populations, such as acculturation and discrimination. Though often considered a socio-demographic factor, in this review we categorize ethnicity among other ethnocultural factors (Kirmayer et al., 2012). We also categorized social support as an ethnocultural factors because we considered important to stress that social support happens within a social and cultural context (Kim, Sherman, & Taylor, 2008).

Search Strategy

We conducted a systematic review of the studies published between 1970 and July 2017. A systematic review was chosen above a meta-analysis due to the expected heterogeneity in topics and study methods. We followed the PRISMA guidelines for reporting systematic reviews (Liberati et al., 2009). We conducted a computer-based search in five relevant psychological and psychiatric bibliographic databases: PubMed, PsychInfo, Web of Knowledge, Cochrane and Science Direct. The keywords used in the search were: Turkish or Moroccan (e.g., Kurd*, Turk*, Morocc*), Europe or each of the European countries (e.g., Europ*, EU, United Kingdom, UK), Immigrant (e.g., immigrant, migration), depression (e.g., affective disorder, depressiv*, depress*, somatoform disorder, psychosomatic, somati*, pain) and illness-related keywords (e.g., illness representations, prevalence, risk factor, protective factor, correlat*, determinant, resilience). We included search covering somatic symptoms due to some studies documenting a high association between depression and somatic complaints in the target population (e.g., Erim et al., 2012). We adapted this search strategy to the requirements of each database (see Appendix S1 for a detailed example of the search strategy). We did not specify a search language. Authors of possibly relevant non-English manuscripts (English abstract), were contacted for an English version. The article was considered for further revision if an English version was available. An exception was made for papers in German, given that at least two authors were proficient in these languages. Dutch was not an exception, because most Dutch academic production is in English.

Inclusion and exclusion criteria

We included full papers in English and German that described studies including:

a) Samples completely or partially conformed by participants 18 years and older (e.g., parents of children, samples aged 15-24 year).

b) Turkish and/or Moroccan immigrant samples from multiple or one of the European countries with large Turkish or Moroccan immigrant groups (United Kingdom, the Netherlands, Belgium, France, Spain, Portugal, Germany, Austria, Switzerland, Italy, Finland, Denmark, Norway, and Sweden; Eurostat, 2011).

c) Samples exclusively conformed by Turkish or Moroccan immigrant individuals or samples that included Turkish or Moroccan immigrants in a larger, mixed sample of diverse immigrant groups warranted that the results were discussed separately, also making a distinction

between Turkish and Moroccan individuals. The latter was important because our objective was identifying specific prevalence rates and correlates of depression for both groups as single entities.

d) Broad information on depressive disorders and symptoms, or relevant to the treatment of depression. This criterion was operationalized by only considering studies that included at least one instrument, subscale, or measure of depression (DSM or ICD clinical diagnoses were considered valid measures of depression too) and/or stated that all or at least the majority (>50%) of the sample received treatment for depression or had depressive symptoms consistent with the reported instrument or the pertinent DSM or ICD diagnoses (e.g., Major Depression disorder, Dysthymic disorder, Persistent Depressive disorder).

We excluded single case reports, reviews of literature, narrative or conceptual papers, and papers that examined mental distress or well-being in general, included measures that did not differentiate depression from other disorders (e.g., the Kessler Psychological Distress scale, K10), or discussed depression marginally, or exclusively in the context of a medical disorder (e.g., diabetes, HIV, cancer), or post-partum depression. The latter criterion was established to limit the extension and content of the review, not because it lacked value for clinical practice. Papers focusing mainly on seasonal affective disorder, bipolar disorder, psychotic mood symptoms, and suicidal behavior were excluded for the same reason.

Procedure of Study Selection and Data Extraction

The first author performed the search. All papers found (N=338) were downloaded to the reference management software Endnote (Version X7). All clearly irrelevant articles (e.g., duplicate papers, index summaries, irrelevant topics, addressing other disorders) were excluded first. In case of doubt, the article was kept for further examination. Next, the second and third author read the abstracts of all remaining articles independently and evaluated them to determine eligibility. The content of the full document was reviewed too. Discrepancies about eligibility were resolved by discussion and consensus. When consensus was not reached, the first author was included in the discussion to reach a consensus (see Figure 1 for the flowchart of the selection procedure).

For each study, a data extraction form was filled in by the first author, and later checked and, if necessary, modified by one of the other two authors. The following aspects were recorded: sample characteristics (type, size, groups, mean age, gender, ethnicity, generation, indicators of SES and acculturation), study design (design, sampling, analysis method, sample size calculation, effect size), topic and research question(s), inclusion and exclusion criteria, instruments, outcome variables, main findings, strengths, limitations, and possible clinical implications. We included discussion points mentioned by the authors of the reviewed studies as well as topics that we considered important. The first and second author tested the data extraction form with three studies with different designs to ensure it could capture the relevant information. Table 1 shows the included studies.

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┌─────────────────────────────┐
│  Records identified through │
│     database searching      │
│        (n = 338)            │
│   • Pubmed:  129            │
│   • PsycINFO: 65            │
│   • Web of Science: 122     │
│   • Science direct: 9       │
│   • Cochrane: 13            │
└─────────────────────────────┘
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Duplicates excluded
(n = 117)

Records assessed for eligibility (title and
abstract screening)
(n = 221)

Records excluded
(n = 104)
1 hit in Italian not meeting inclusion
criteria.

Publications assessed for
eligibility
(n = 117)

Excluded (n = 81)
- The study focus was general distress or
  well-being without measure of or important
  allusion to depressive symptoms (34). Of
  which 2 studies focused on consumption of
  psychotropics.
- No separate discussion of results for
  Turkish, Moroccan groups (9), of which 1
  study examined Turkish and Moroccan
  groups together.
- Other immigrant populations (3).
- Other psychological disorders (7).
- Medical related topics, e.g., dementia,
  cancer (4).
- Other publication type than original
  quantitative paper, e.g., single-case
  discussion (5)
- The study focus was symptom
  manifestation or effectiveness of treatment
  for depression (without overlap with
  current topics) – discussed in other paper-
  (18)
- Not retrieved – author did not respond (1)

Publications included in
qualitative synthesis
(n= 36)

Figure 1. Flowchart of the literature search and study selection

Data Synthesis

Quality assessment

The same two reviewers who performed the data extraction per paper also assessed the methodological quality of those studies independently. For the quantitative (intervention) studies, we used the Quality Assessment Tool for Quantitative Studies (Thomas, Ciliska, Dobbins, & Micucci, 2004) as the basis, and also included elements especially relevant for the current topic (e.g., cross-cultural validity and reliability for both target groups) or appointed in

recognized review guidelines, such as the Risk of Bias assessment tool by the Cochrane Collaboration (Lundh & Gotzsche, 2008; Shamliyan, Kane, & Dickinson, 2010). For the qualitative studies, we used the guidelines of Greenhalgh and Taylor (1997) and the checklist for editors of the British Medical Journal (BMJ, 2013). Quality indicators to clarify the criteria were extracted from the Quality in Qualitative Evaluation Framework (Spencer, Richie, Lewis, & Dillon, 2003). The assessment criteria lead to quality ratings of 'weak' (WQ), 'moderate' (MQ), and 'strong' quality (SQ) (see Appendix S2 for the quality criteria and Appendix A the detailed quality ratings).

The pooled prevalence of depression
We calculated the pooled prevalence of depression in the investigated groups of comparable studies. To combine the prevalence rates, DerSimonian–Laird random-effects meta-analysis (DerSimonian & Laird, 1986) was performed, taking into account potential random differences between studies regarding differences in methods, measures, or settings (Lipsey & Wilson, 2001). For each study, the proportion of people with depression was transformed into a logit event rate and the corresponding standard error was computed (Lipsey & Wilson, 2001). These logits were reconverted into proportions, in order to facilitate result interpretation. We also computed 95% confidence intervals (CIs) using the sample size (n) and standard error, and Q-statistics to test the homogeneity of sets of studies' effect sizes (Cochran, 1954). The limited number of included studies hindered the proper assessment of a funnel plot (Egger, Smith, Schneider, & Minder, 1997), or the use of more advanced regression-based evaluations for publication bias. Analyses were conducted using Comprehensive Meta-analysis (Biostat, Version 2.2).

Quality of the correlates
A box-score method was used to quantify the relationships between the identified psychological variables and depressive symptoms. To this purpose, we tabulated each variable and its association (positive, negative or neutral) with depressive symptoms per study. This implied that more than one association could belong to one study, especially regarding multifactorial variables. Using the quality rating of each study, we calculated the average quality ratings of the mentioned relationships per association type (see Table 4) and per variable (mentioned in the text). Average quality ratings between 1 and 1.4 were considered 'strong' (SQ), between 1.5 and 2.4 'moderate' (MQ), and between 2.5 and 3 'weak' (WQ).

Intersectionality
Due to the still incipient use of the intersectional approach in the field, and more specifically in the study of Turkish and Moroccan immigrant populations, we used the single factors as leading framework. Within the discussion of every single factor, we mentioned the existent interplay with other correlates.

This study is part of a larger review study and reports henceforth only on the included papers that examine the prevalence and correlates of depressive disorders and depressive symptoms among the aforementioned groups. Other results of the described search are reported in another paper (Sempértegui et al., 2019).

Results

A total of 36 studies, published between 2000 and 2017, met inclusion criteria and concerned prevalence and correlates of depressive disorders and symptoms among Turkish and Moroccan populations in Europe. All included studies were quantitative and used a cross-sectional design regarding the prevalence and correlates. All studies included Turkish samples and 14 of these studies also included Moroccan samples. The studies included n = 58,993 Turkish immigrant individuals, of which 52.4% were women. The total number of Moroccan individuals in the studies was n = 81,758, of which 48.7% were women. The studies included N = 984,849 native individuals, of which 55.7% were women. The median sample size was 205 (range 29-41,226) for Turkish, 299 (range 153-72 484) for Moroccan, and 309 (range 309-692 107) for native populations. Forty-one percent of the studies with Turkish and 57% of the studies with Moroccan individuals examined community samples. A minority (22%) of the studies with Turkish individuals received a SQ rating, 38%, MQ, and 41%, WQ. A third (29%) of the studies with Moroccan individuals received a SQ rating, 57%, MQ, and 14%, WQ. See Table 1 for the summary of the included studies and appendix A for the detailed quality ratings. In the following sections, we prioritize the findings of SQ and MQ studies.

Prevalence and Comorbidity

We present in Table 2 the 14 studies examining current (n=7), 1-month (n=5), 1-year (n=2), lifetime (n=1) prevalence of depressive disorders, and 1-year prevalence of comorbid depressive and anxiety disorders (n=1) among Turkish or Moroccan immigrant populations in the Netherlands, Belgium, and Germany.

Four studies were considered generally comparable in terms of country (Netherlands), sample source (general population / community-based) and primary diagnostic instrument (CDI) to assess depression, and provided data to calculate the 1-month pooled prevalence of depression in the three investigated groups (natives, Moroccan, Turkish). The combined prevalence of depressive disorders was 17.2% (95% CI: 14.8-19.9%) for Turkish-Dutch, 6.1% (95% CI: 4.4-8.4%) for Moroccan-Dutch, and 4.7% (95% CI: 3.5-6.2%) for native-Dutch (see Table 3). Heterogeneity was not significant for any group. These figures represented the estimates of mostly first-generation, low educated, Turkish and Moroccan individuals.

Taking also studies using self-report measures of depression (e.g. BDI, SCL-90, PHQ-9) into account, the one-month prevalence in the general population for Turkish-Dutch was significantly and consistently higher than the prevalence for native Dutch (Braam et al., 2010; de Wit et al., 2008; Ikram et al., 2015; Schrier et al., 2010; van der Wurff et al., 2004). The one-month prevalence of depression among Turkish-Dutch was also higher than other immigrant groups' prevalence (Ikram et al., 2015) including in some cases the Moroccan-Dutch (de Wit et al., 2008; van der Wurff et al., 2004).

Furthermore, as shown in Table 2, the Turkish group had the highest lifetime (31.1%), one-year prevalence (22.4%; de Wit et al., 2008), and one-year prevalence of comorbid anxiety and depressive disorders (9.8%) in the general population (Schrier et al., 2012) compared to Moroccan-Dutch and native Dutch. Turkish- Dutch also had the highest one-year prevalence (3.28%) in the

2

Table 1. Characteristics of the included studies (n=36) and assessed study quality

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Prevalence						
Beutel et al., 2016* Germany	Cross-sectional, cohort study; general population	14.943, -, (35-74), - 11418 native German (nD), 49.3%, 55.5 ± 11.1 - 141 Turkish-German (TG), 50.9%, 52.6 ± 10.6 - 295 Polish-German (PG), 49.4%, 54.7 ± 11.1 - 282 Western countries immigrants - 386 Middle and Southern European immigrants.	SES (3 lowest-27): 12.0 (TG), 14.0 (PG), 12.0 (nG). Employment: 64.5 (TG); 63.3 (PG), 59.6 (nG) Pension: 21.1 (TG); 30.2 (PG), 32.7 (nG) Net income: 750-1499€ 15.3% (TG), 8.2% (PG), 9.7% (nG), 1500-2999 44.7% (TG), 33.8% (PG), 38.3% (nG), Marital status: married or relationship: 84.2 (TG); 79.6 (PG), 81.0 (nG) Generation: first 100% Duration of stay: 31.4 ± 8.4 (TG), 28.2 (±12.9; PG)	PHQ-8	GAD-7 PHQ-panic module Mini-Spin DS-14	3 / -
Braam et al., 2010* The Netherlands	Cross-sectional, general population sample, Amsterdam	776, 57%, 51 ± 14.8, (19-82) - 309 nD, 59%, 54 - 180 MD, 46%, 49 - 202 TD, 59%, 47 - 85 SAD, 72%, 52	Education (mean, 0-8): 4.8 (nD), 2.5 (MD), 3.0 (TD), 4.7 (SAD) Income: > 1350 € 84% (nD), 32% (MD), 49% (TD), 65% (SAD)	SCL-90-R (depression subscale) CIDI 2.1, (section E)	brief RCOPE	1 / 1
Erim et al., 2011a Germany	Cross-sectional, clinical sample, outpatients with psychosomatic complaints	51 TG, 78.4%, 39.41 ± 9.85	Education: none-elementary school 39.2%; university 2.0 % Occupation: employed 31.4%, housewife/ husband 39.2%, unemployed 13.7% Marital status: married 62.7% Duration of stay: 22.3 ± 10.10 Age at migration: 22.2 ± 8.92 Reason of migration: marriage 45.1%, work 2% Generation: first 76.5%, second 19.6%	SCID-I (296.2, 296.3, 300.4) BDI	SOMS ETI	3 / -
Fassaert et al., 2010 The Netherlands	Cross-sectional, general practice sample	147,109, not stated, 51.8 ± 18.5 - 4884 TD; 72.5%, 38.7 ± 11.3 - 3458 MD; 67.1%, 35.7 ± 9.3 - 131,690 nD, 69.1%, 53.2 ± 18.6	Disposable income (in units of 1000€): 16.300 ± 6.0 (TD), 14.8 ± 5.1 (MD), 20.5 ± 12.6, (nD) Marital status: Married, living together 64.5% (TD), 58.9% (MD) 41.6% (nD)	ICPC diagnosis (P03, P76)		2 / 2

Table 1. Continued

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Prevalence						
Fassaert et al., 2010 The Netherlands	Cross-sectional, clinical sample, in-outpatients	17,270 episodes of treatment; (18-65) - 947 TD, 68.7% female 35.4 ± 8.3 - 834 MD, 58.4% 35.3 ± 8.7 - 12,824 nD, 65.4% 40.6 ± 11.7, - Dutch Antillean - Surinamese - Other non-western - Other western	Urbanization: very high 59.9% (TD), 71.6% (MD), 26.0% (nD) Marital status: married 72.1% (TD), 66.3% (MD), 45.4% (nD)	DSM-IV-diagnosis (codes 296.21–296.24 and 296.31–296.34)		2 / 2
Ikram et al., 2015* Germany	Cross-sectional, community sample, Amsterdam	44.9%, (18-70) - 834 TD, 53.2%, 39.8 ± 11.17 - 1744 nD, 53.5%, 46.5 ± 13.9 - 1126 South Asian Surinamese, 52.7%, 45.8 ± 13.14 - 1770 African Surinamese,62.1%; 46.8 ± 12.8 - 1072 Ghanaians-Dutch, 59.0%, 45.0 ± 12.2	Education: none-low 34.7% (TD), 3.0% (nD); highest 13.4% (TD), 58.4% (nD). Employment: unemployed 13.8 (TD), 5.4% (nD); not in labor force 32.5 (TD), 21.6% (nD) Marital status: in relationship 68.0% (TD), 56.7% (nD) Generation: first 71% (TD)	PHQ-9	EDS	1 / -
Levecque et al., 2009* Belgium	Cross-sectional, general population	506, not stated, (18-65) - 11747 nB; 52.0%, 41.98 ± 13.12 - 147 TB, 45.6%, 36.81 ± 10.24 - 359 MB; 48.2%, 38.74 ± 10.89	Education: none-low 54.01% (TB), 41.42% (MB), 31.55% (nB) Occupation: employed 43.07% (TB), 44.51% (MB), 69.02 (nB) Monthly income: >2500€ 5,43% (TB), 6.44% (MB), 32.56% (nB) Home ownership: owner 48.28% (TB), 30.40% (MB), 72.69% (nB) Household: couple, with children 58.50% (TB), 46.80% (MB), 33.28% (nB)	GHQ-12 SCL-90-R (depression, generalized anxiety)	MOSS	1 / 2
Morawa et al., 2014b* Germany	Cross-sectional, community, convenience sample	218, 67%, 40.0 ± 13.2 - 109 TG, 67% - 109 PG, 67%	Education: high school 46.8% (TG); 72.5% (PG) Employment: active 35.8% (TG); 50.5% (PG) Marital status: married 88.1% (TG), 61.5% (PG) Duration of stay: 23.7 (±11.7, TG); 16.3 (±7.7, PG) German proficiency: good 19.3% (TG); 35.8% (PG)	BDI	SF-36 Perceived discrimination Scale	3 / -

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Prevalence						
Sariaslan et al., 2014* Germany	Cross-sectional, general practice sample	418, 47.1% - 254 TG, 42.9%, 38.37 ± 12.28 - 164 nD, 53.7%, 54.30 ± 18.34	Education: 10 grades high school 26.0% (TG), 65.2% (nG); high school 41.7% (TG); 9.8% (nG) Employment: non-active 15.7% (TG); 4.3% (nG) Income: 1000–2000 26.0% (TG), 35.4% (nG) Marital status: married 74.8% (TG), 53.7% (nG) Duration of stay: 25.84 ± 10.93 (TG) Generation: first 65.7% (TG)	BDI	SOMS	1 / -
Schrier et al., 2010 The Netherlands	Cross-sectional study, community sample, Amsterdam, random stratified sample	812, - - 213 TD, 60.1%, 47.3 ± 14.2 - 191 MD, 47.1%, 49.6 ± 14.4 - 321 nD, 58.3%, 54.1 ± 14.6 - 87 Surinamese-Dutch (SD), 71.3%, 52.3 ± 15.2	Education: none or primary only 60% (TD), 20% (MD), 17% (nD) Family income: low 80% (TD), 31% (MD), 51 % (nD, SD) Generation: first >90% Preference native language: >68.9%	CIDI 2.1 (section E) SCL-90-R (depression)	WHODAS II	2 / 2
Schrier et al., 2012 The Netherlands	Cross-sectional study, community sample, Amsterdam	698, - - 205 TD, 61.5%, 47.5 ± 14.1 - 186 MD, 47.8%, 49.5 ± 14.5 - 307 nD, 58.6%, 54.1 ± 14.8	Education: none or primary 59.3% (TD), 60.2% (MD), 19.7% (nD) Occupation: unemployed, 26.1% (TD), 22.8% (MD), 7.1% (nD) Language preference: native tongue 88.8% (TD), 68.7% (MD) Generation: second 7.3%(TD), 7.0% (MD) Age at migration: 25.4 ± 10.6 (TD), 27.3 ± 10.3 (MD)	CIDI 2.1 (sections D, E)	K10	2 / 3
Ünlü Ince, Fassaert, et al., 2014* The Netherlands	Cross-sectional, community sample, Amsterdam	210 TD, 40%, 47.4 ± 14.2	Education: none 49%, high 22.9% Occupation: none 81.4% Marital status: partnership 80.5% Generation: first 92.4%	CIDI 2.1 (section D, E)	LAS	2 / -
De Wit et al., 2008* The Netherlands	Cross-sectional study, community sample, Amsterdam	812, -, (19-92) - 213 TD, 60% - 191 MD, 47% - 320 nD, 58% - 88 Surinamese-Dutch (SD), 71%	Education: none or primary 61% (TD), 60% (MD), 20% (nD), 17% (SD) Monthly family income: below welfare level 44% (TD), 56% (MD), 25% (SD), 7% (nD). Reason for migration: work 51% (TD men), 57% (MD men); family reunification 81% (TD women), 89% (MD women) Generation: first >92-93%	CIDI 2.1 (sections D, E)	K10 MH15	2 / 2

Table 1. Continued

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Prevalence						
Van der Wurff et al., 2004* The Netherlands	Cross-sectional study, non-institutionalized community sample	933, 49.9%, 64.6 ± 5.3 (55-74) - 330 TD, 50.3%, 63.5 ± 5.0 - 299 MD, 43.8%, 64.9 ± 4.8 - 304 nD, 55.6%, 65.4 ± 5.9	Education: none 95.8% (TD), 98.7% (MD), 28.47% (nD) Income: below poverty level 51.5% (TD), 77.4% (MD), 17.5% (nD)	CES-D	Ethnic-cultural identity scale (Martens, 1999; van den Reek, 1998; Kemper, 1996)	1 / 1
Correlates						
Akbiyik et al., 2008 Germany, Turkey	Cross-sectional study, clinical sample, outpatients	105, 44.9% - 53 TG, 64%, 49.4±8.4 - 52 nT, 73%, 44.7 ±9.2	Total work years: 20.0 ± 10.0; (TG); 12.3 ± 12.5 (nT) Income: moderate 26% (TG), 82% (nT); low 54% (TG), 13% (nT) Marital status: married 81% (TG), 78% (nT) Generation: first 100% (TG)	MINI SCL-90-R BDI	MANSA	2 / -
Arens et al., 2013 Germany	Cross-sectional study, healthy and clinical sample	108, 100% women, - 28 healthy TG (hTG), 100%, 43.6 ± 9.6 - 26 healthy nG (hnG), 100%, 43.8 ± 11.2 - 29 TG with depression (TGd), 100% 44.4 ±8.1 - 25 nG with depression (nGd), 100%, 43.4 ±10.7	Education: 10 grades high school 17.9% (hTG), 61.5% (hnG), 24.1% (TGd), 56.0% (nGd) Marital status: married/cohabiting 75.0% (hTG), 69.2% (hnG), 65.5% (TGd), 28.0% (nGd) Generation: first 100% Duration of stay: 20.4 ± 11.1 (hTG); 25.1 ± 8.1 (TGd)	SCID-I SCL-90-R BDI	SCID-II PANAS ERQ DAS-A	3 / -
Balkir et al., 2013 Germany	Cross-sectional design, clinical sample, inpatients	56, 100% - 29 TG, 100%, 44.5 ± 1.8 - 27 nG, 100%, 43.3 ± 1.9	Education: 10 grades high school 24.1% (TG), 51.9% (nG) Marital status: married/cohabiting 65.5% (TG), 33.3% (nG) Duration of stay: 25.1 ± 8.1 (TG)	SCID-I SCL-90-R (depression subscale, Global Severity Index)	SCID-II PANAS SCS	3 / -
Balkir et al., 2013 Germany	Cross-sectional design, clinical sample, inpatients	110, 100%, - 28 healthy TG, 100%, 43.6 ± 1.9 - 26 healthy nG, 100%, 43.9 ± 2.0 - 29 TG with depression (TGd), 100%, 43.3 ±1.9 - 27 nG with depression (nGd), 100%, 44.5 ±1.8	Education: 10 grades high school 17.9% (hTG), 61.5% (hnG), 24.1% (TGd), 51.9% (nGd) Marital status: married, cohabiting 75.0% (hTG), 69.2% (hnG), 65.5% (TGd), 33.3% (nGd) Duration of stay: 20.4 ±11.1 (hTG); 25.1 ± 8.1 (TGd) Generation: first 100%	SCID-I SCL-90-R (depression subscale, Global Severity Index)	SCID-II PANAS Loneliness Scale, Basic Psychological Need Satisfaction Scale (autonomy and relatedness subscales)	3 / -

Correlates

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Baltas and Steptoe, 2000 United Kingdom	Cross-sectional study, community sample	66, 50%, 39.3 ± 9.2, (26-54) - 33 TBr, 30.3% - 33 nBr, 69.7%	Education: university 78.8% (TBr), 65.4% (nBr) Duration of stay: 12.2 ± 6.7 (TBr)	BDI	STAI (trait subscale) Marital cultural difficulties index	3 / -
Bengi-Arslan et al., 2002 The Netherlands	Cross-sectional, general population	785 TD, 66.6%, age not mentioned	Not mentioned	GHQ-28 (severe depression)	Turkish Immigrant Assessment Questionnaire	2 / -
Erim et al., 2011 Germany	Cross-sectional study, clinical sample, outpatients	156, 76.9%, 37.4 (± 9.78, 19-71) - 96 TG, 76%, 36.67 (±9.52) - 60 nT, 78.3%, 38.57 (±10.15) - German general population norm value - German outpatient population norm value	Education: no education 8.3% (TG), 0% (nT) Employment: unemployed 68.8% (TG), 66.7% (nT) Marital status: married 66.7% (TG), 72.9 (nT) Duration of stay: 14.15 (±10.81)	ICD-10 diagnosis (codes F3, F4, F5) BDI	SOC-29	2 / -
Gül and Kolb, 2009 Germany	Cross-sectional study, clinical sample, outpatients	220 TG, 42.9%, 23.4 ± 3.49, (18-30) - 154 well acculturated TG - 66 marginalized / separated TG	Not mentioned	ICD-10 diagnosis (code F1, F2, F42, F32, F41, F42, F43.2)	5-item Acculturation Questionnaire	3 / -
Ikram et al., 2016 The Netherlands	Cross-sectional study, community sample, Amsterdam	11780, 58.4% women, 43.0 ± 13.1, (18-70) - 2484 MD, 62.5%, 39.3 ± 13.1 2626 TD, 54.3%; 39.8 ± 12.4 - 2501 South Asian Surinamese, 54.3%, 45.3 ±13.4 - 2292 African Surinamese,62.7%, 46.9 ± 12.8 - 1877 Ghanaians-Dutch, 59.1%; 44.6 (±11.4)	Education: none-low 32.2% (MD), 33.5% (TD); highest 16.3% (MD), 13.6% (TD). Generation: first 67.1 (MD), 70.3% (TD)	PHQ-9	EDS Psychological Acculturation Scale (ethnic identity subscale) Ethnic social network (2 questions)	1 / 1

Table 1. Continued

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Correlates						
Kizilhan et al., 2015 Germany	Cross-sectional, clinical sample, inpatients with psychosomatic complaints	270 TG, 100%, (30-50) - 120 TG forced to marry, 42.9% - 150 TG not forced to marry, 46.7%	Not mentioned	BDI SCL-90-R (depression)	Koch's sociodemographic questionnaire (1997)	3 / -
Mewes et al., 2010 Germany	Cross-sectional, general population sample	134, - - 42 TG, 31%, 30.9±10.5 - 43 East European-German (EeG), 67%, 51.7±21.5 - 49 Soviet Union-German (SUG), 53%, 44.3±19.6	Employment: employed 64% (TG), 49% (EeG), 37% (SUG) Marital status: in relationship 60% (TG), 69% (EeG), 42% (SUG)	PHQ-9	PHQ-15, PHQ-general anxiety	3 / -
Mewes et al., 2015 Germany	Cross-sectional, general population sample	214 TG, 63%, 33 ± 10.9, (18-66)	Education: none 0.9%, university 29.4% Duration of stay: 26 ± 12.5 Generation: first 47% Migration motivation: family reunification 48%, political prosecution 4% Residence: 68% German nationality, 4.7% temporary residence permit Language skills: very good 62%, bad 5%	PHQ-9	PHQ-15 PSS-10 BIAS-TS IPAC	2 / -
Morawa & Erim, 2014b Germany	Cross-sectional, clinical sample, out- and inpatients with psychosomatic complaints	471 TG, 46.3%, 39.7 ± 11.5	Education: none 3.2, vocational school 39.1%, high 9.1% Employment status: employed 43.5%, jobless 11.0% Income: <500€ 14.9%, 1000-2000€ 29.5% Marital status: married 70.7%, Duration of stay: 24.3 (11.1) Generation: first 77.1% Age of immigration: 18.9 (8.0) Migration motivation: marriage 39.1%, family reunion 22.5% Language proficiency: moderate 38.0%	BDI	FRACC	2 / -

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Correlates						
Nap et al., 2015 The Netherlands	Cross-sectional; naturalistic, longitudinal (not the reviewed section), clinical sample, outpatients	737, - - 197 TD, 60.4%, median = 37 - 328 MD, 48.8%, median =35 - 212 SD, 70.6%, median = 40	Generation: first 77% (all groups)	BSI (depression subscale)	BSI (somatization, anxiety, depression subscale) LAS EQ-5D Patient Request Form (PBV) Dutch shortened version	2 / 2
Reijneveld et al., 2007 The Netherlands	Cross-sectional, community sample	933, 49.9%, 64.6 ± 5.3, (55-74) - 330 TD, 50.3%, 63.5 ± 5.0 - 299 MD, 43.8%, 64.9 ± 4.8 - 304 nD, 55.6%, 65.4 ± 5.9	Education: primary education or less 95.8% (TD), 98.7% (MD), 28.4% (nD) Income: poverty line or below 51.5% (TD), 77.4% (MD), 17.5% (nD) Marital status: married 82.1% (TD), 84.6% (MD), 54.6% (nD) Duration of stay: 27.0 ± 10.6 (TD), 25.3 ± 9.6 (MD)	DSM-IV-diagnosis, CES-D	Katz'questionnaire SF-36 OECD mobility scale	2 / 2
Schrier et al., 2013 The Netherlands	Cross-sectional study, community sample, Amsterdam	682, 44.9% - 203 TD, 61.1%, 44.7 ± 9.2 - 170 MD, 42.9%, 49.4 ± 14.6 - 309 nD, 58.9%, 54.1 ± 14.7	Education: none or primary only 60.2% (TD),58.2% (MD), 19.9% (nD) Occupation: unemployed 26.4% (TD), 25.0% (MD), 7.1% (nD) Generation: second 6.9% (TD), 7,6% (MD)	CIDI 2.1. (section D, E) SCL-90-R (depression subscale)	NEO-FFI SCL-90-R (anxiety, phobic anxiety subscales)	2 / 2
Schmitz & Schmitz, 2012 Germany	Cross-sectional study, community sample	N1= 349, 48.2% - 197 TG, 48.2%, 22.8 - 150 North-African-German (e.g., Moroccan, Algerian, Tunisian) (NAG), 58%, 23.4 N2 = 65, 61.5%, 21.3 - 44 TG - 21 North-African-German (NAG)	Not mentioned	BDI	TMMS-24 AAS SWLS SHS Immigrant Adolescent Questionnaire (unfairness scale) Acculturation Behavior Ratings	3 / -

Table 1. Continued

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Correlates						
Selten et al., 2012 The Netherlands	Cross-sectional study, clinical sample, in- and outpatients, Utrecht	862762 case files, 50.1%, (15-65) - 41226 TD, 48.7% - 72484 MD, 47.3% - 692132 nD, 51.6% - 26345 SD, 51.4% - 30575 Western-European (WE), 51.6%		DSM-IV-diagnosis (codes 296.2x, 296.3x, 296.0, 296.4x, 296.5x, 296.6x, 296.7x, 296.89, 295.x, 297.1, 298.8, 298.9)		3 / 3
Tagay et al., 2008 Germany	Cross-sectional study, clinical sample, general practice patients	195 Turkish/Kurdish German, 63.6%, 40.5 ± 13.3	Education: elementary school 27.3%; vocational school 40% Work: employed 47.8%, unemployed 46.7% Occupation: blue-collar worker 70.2%, entrepreneur 3.3% Marital status: married 80.0% Duration of stay: 25.3 ± 8.9 Nationality: German 28.0%, German and Turkish 15.5%, Turkish 56.4% Feeling connected with country: Germany 16.0%, Turkey 29.9%, both 46.4%, none 6.2%	HADS	ETI	3 / -
Uslucan, 2005 Germany	Cross-sectional study, convenience sample (general practice patients and community sample), Berlin	357 TG, 63.6%, 34.3 ± 12.3 (13-66)	Education: primary school 33.6%, secondary and vocational school 51.9% Spirituality: religious 52%, secular 48% Ethnic identity: Turkish 72%, German 22.4% Generation: second 20%	ICD-10 screening (depressive symptoms)	Dundee Relocation Inventory Self-esteem Scale Emotional avoidance coping Social Support Scale	3 / -

2

Correlates

Author, year, Country	Design; population type	Study sample (N; % female; ageM ±SD/(range)) (n; ethnicity, % female; ageM ±SD/(range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Van Dijk et al., 2010 The Netherlands	Cross-sectional study, community sample, Amsterdam	352, 49%, 19 (15-24) - 199 TD, 44.7%, 18.9 (±2.7) - 153 MD, 54.9%, 18.6 (±2.7)	Education: middle to high 60.4% (TD), 69.4% (MD) Marital status: married, cohabiting 14.6% (TD), 12.4% (MD) Duration of stay: 16.1 ± 5.3 (TD), 15.8 ± 5.7 (MD) Generation: second 69.8% (TD), 71.9% (MD)	CES-D	Perceived discrimination scale	1 / 1

Note: *Study also belongs to the 'correlates' section. Abbreviations: T = Turkish sample, M = Moroccan sample; Study quality rating 1 = strong quality (SQ), 2 = moderate quality (MQ), 3 = weak quality (WQ); SES = socioeconomic status; RCT = Randomized Controlled trial; TD = Turkish-Dutch; MD = Moroccan-Dutch; nD = native Dutch; TB = Turkish-Belgian; MB = Moroccan-Belgian; nB = native Belgian; TG = Turkish-German; nG = native German; TBr = Turkish-British; nBr = native British.

Instruments abbreviations: AAS = Acculturation Attitude Scale; BDI = Beck Depression Inventory; BIAS-TS = Behaviors from Intergroup Affects and Stereotypes–Treatment Scale; Brief RCOPE = Short measure of religious coping; BSI = Bradford Somatic Inventory; CES-D = Center for Epidemiologic Studies Depression Scale; CIDI 2.1 = Composite International Diagnostic Interview 2.1; DAS-A = Dysfunctional Attitude Scale Form A; DS-14 = Type D Scale-14; EQ-5D = EuroQol five dimensions questionnaire; EDS = Everyday Discrimination Scale; ERQ = Emotion Regulation Questionnaire; ETI = Essen Trauma Inventory; FRACC = Frankfurt Acculturation Scale; GAD-7 = Generalized Anxiety Disorder -7; GHQ-28, 12 = General Health Questionnaire 28, 12; HADS = Hospital Anxiety and Depression Scale; ICD-10 = 10th International Classification of Diseases and Related Health Problems; ICPC = International Classification of Primary Care; IPAC = International Physical Activity Questionnaire; K10 = Kessler Psychological Distress Scale; LAS = Lowlands Acculturation Scale; MANSA = Manchester Short Assessment of Quality of Life; MH15 = Mental Health Indicator; MINI = Mini International Neuro-psychiatric Interview; Mini-Spin = Mini-Social Phobia Inventory; MOSS = Medical Outcome Social Support Scale; NEO-FFI = NEO Five Factor Inventory; OECD mobility scale = Long-term limitations in mobility; PANAS = Positive and Negative Affect Schedule; PHQ-9, 15 = Patient Health Questionnaire-9, 15; PSS-10 = Perceived Stress Scale; SCID-I = Structured Clinical Interview for DSM-IV axis I; SCID-II = Structured Clinical Interview for DSM-IV axis II SCL-90-R = Symptom Checklist-90-Revised; SCS = Self-Construal Scale; SF-36 = Short Form Health Survey Questionnaire; SHS = Subjective-Happiness-Scale; SOC-29 = Sense of Coherence scale; STAI = State – trait Inventory Anxiety; SWLS = Satisfaction with Life Scale; TMMS-24 = Trait-Meta Mood-Scale; WHODAS II = World Health Organization Disability Assessment Schedule II.

general practice (Fassaert, Nielen, et al., 2010). Moroccan-Dutch in the general population, especially elderly, had in most studies higher one-month prevalence rates (de Wit et al., 2008; Schrier et al., 2010; van der Wurff et al., 2004) but lower one-year and lifetime prevalence than the native Dutch (9.8%, 15.2% vs. 10.3%, 24.8%; de Wit et al., 2008). Only one study examined the Dutch secondary mental health care (Fassaert, Peen, et al., 2010). In this sample, Moroccan-Dutch patients showed a higher prevalence of severe depression than Turkish- or native Dutch. Moroccan- and Turkish-Dutch patients showed a higher prevalence of comorbid DSM-IV axis I disorders, but recurrent depression was more prevalent among native Dutch.

To summarize the Dutch data, taking the pooled one-month prevalence rates as main indicators, we found that Turkish-Dutch of the general population have the highest prevalence of depressive disorders, which was higher that the prevalence of Moroccan-Dutch and native-Dutch. Moroccan-Dutch and native-Dutch did not differ in (rather low) prevalence rate. Practically the same patters were found regarding the one-year prevalence rates, but the lifetime prevalence showed that the Moroccan-Dutch had a much lower prevalence than both Turkish- and native Dutch (see Table 2).

The only Belgian study (Levecque, Lodewyckx, & Bracke, 2009), performed on a national community sample, showed that the prevalence of high-severity depressive disorder (90% cut-off on the SCL-90 depression subscale) is higher among Turkish (15.4%) and Moroccan immigrants (14.2%), when compared to Belgian natives (9.1%).

Five German studies examined the prevalence of depressive disorders in Turkish-German immigrants. Three of them were considered relatively comparable in terms of sample source (general/community population and general practice), and the primary diagnostic instrument (self-report) to assess depression. The pooled 1-month prevalence rate arising from these studies was 21.4% (95% CI: 17.8-25.4%) for Turkish-German, with non-significant heterogeneity, $Q(2) = 1,856$; p>0.01. The prevalence of clinically significant depressive disorders was higher than the prevalence of Polish-German individuals and norm values for the German population were (Beutel et al., 2016; Morawa & Erim, 2014b; Sariaslan, Morawa, & Erim, 2014). In separate gender analyses, Turkish-German women showed the highest prevalence of depression (35%; Beutel et al., 2016). In samples of Turkish-German patients with psychosomatic symptoms, the prevalence of major depressive disorders was 37.3%, and there was a high comorbidity of mood disorders with somatoform disorders (43.9%- 85.7%), and posttraumatic stress disorder (31.4%; Erim, Morawa, Ozdemir, & Senf, 2011). Summarizing, the current prevalence of depressive symptoms for Turkish-German population was high and considerably higher than the prevalence of the native-German (based on norm values).

Correlates of Depressive Symptoms

The results of the box-analysis in Table 4 show the associations included in 30 studies conducted in German (n=16), The Netherlands (n=12), Belgium (n=1), and the United Kingdom (n=1) examining the relationship between psychological characteristics, socio-demographic factors, ethnocultural aspects and depressive symptoms.

Psychological characteristics

Personality
One MQ study found that Turkish- and Moroccan- Dutch (mostly first generation) community individuals showed the same personality profile (high neuroticism, low extraversion, agreeableness, and consciousness) related to higher depressive disorders seen in native Dutch (Schrier et al., 2013) . The association with depressive symptoms was stronger for neuroticism for Turkish-Dutch compared to Moroccan- and native Dutch. The same was the case for lower agreeableness of Moroccan-Dutch compared to Turkish- and native Dutch, also after controlling for gender, age, education and employment (Schrier et al., 2013).

Emotion regulation and autonomy-relatedness concepts
There were five (average WQ) studies with mostly female, Turkish-German, community and clinical samples on these domains (Arens, Balkir, & Barnow, 2013; Balkir, Arens, & Barnow, 2013; Balkir, Arens, Wolff, & Barnow, 2013; Schmitz & Schmitz, 2012; Uslucan, 2005). Findings showed that a balanced use of emotion regulation strategies (frequent use of both cognitive reappraisal and expressive suppression; Arens et al., 2013) and higher emotional intelligence (ability to recognize, regulate and observe own's and other people's emotions; Uslucan, 2005) were related to lower levels of depressive symptoms for Turkish-German. Furthermore, balance between both satisfaction with autonomy as with relatedness (Balkir, Arens, & Barnow, 2013), and identification with both independent and interdependent self-construal (i.e., the definition of the self is both formed by individual and relational experiences; Balkir, Arens, Wolff, et al., 2013) were related to lower depressive symptomatology in Turkish immigrant populations, also after controlling for socio-demographic variables.

Comorbid factors
In four (average MQ) studies, traumatic experiences (Kizilhan, 2015; Tagay et al., 2008), and perceived stress (Mewes, Asbrock, & Laskawi, 2015) were related to higher severity of depression in Turkish-German general practice patients and in patients with psychosomatic complaints. Depressive symptoms were also negatively associated with quality of life of Turkish-German patients with depression (Akbiyik, Berksun, Sumbuloglu, Sentürk, & Priebe, 2008).

Socio-demographic factors

Sex
The results regarding female sex were mixed for Turkish and Moroccan groups (see Table 4). About 50% of the studies examining sex in Turkish (8/19; MQ) and Moroccan (4/7; MQ) samples found sex neither to be related to nor predictive of depressive symptoms (de Wit et al., 2008; Erim, Morawa, Atay, et al., 2011; Mewes, Rief, Martin, Glaesmer, & Brahler, 2010; Schrier et al., 2013; Selten, Laan, Kupka, Smeets, & van Os, 2012; Uslucan, 2005; van Dijk, Agyemang, de Wit, & Hosper, 2011). This result applied for large Moroccan-Dutch and Turkish community and patient populations of Germany, The Netherlands, and the UK, though the sample of Turkish-

Table 2. Overview of the prevalence rates organized by country and type of prevalence

Country	Type of prevalence	Study	Instrument (cut-off) / Diagnoses	Population	Age (Range/ M±SD)	Turkish (%)			Moroccan (%)			Natives (%)		
						Male	Female	All	Male	Female	All	Male	Female	All
Belgium	Current	Levecque et al., 2009[c]	SCL-90 (90% cut-off)	Community-based	18-65			15.4[a]			14.2[a]			9.1
Germany	Current	Morawa & Erim, 2014[c]	BDI (≥18 cut-off	Community-based, Ruhr region	40.0±13.2			25.7[a]						7.9
		Sariaslan et al., 2014[c]	BDI (≥18 cut-off)	General practice patients	38.37 ±12.3			19.3[a]						7.9
		Beutel et al., 2016[d]	PHQ-9 (≥10 cut-off)	General population, Western-mid region	35-74	14.8	35.1*	21.6[a]						6.8
	Unclear	Erim et al., 2011	Single depression MDD DSM-IV diagnosis (code 296.2)	Psychosomatic outpatients secondary care	39.41±9.9			37.3			-			-
	Unclear		Recurrent depression DSM-IV (code 296.3)					7.8						
	Unclear		All mood disorders DSM-IV (codes 296.2, 296.3, 300.4)					78.4						
The Netherlands	Current	Van der Wurff et al., 2004[c]	CES-D (≥16 cut off)	Community-based, non-institutionalized	55-64	47.2[a]	64.3[a]*	55.5[a]	21.1[a,b]	45.2[a,b]*	31.9[a,b]	13.6	20.0	16.9
					65-74	64.4[a]	73.5[a]	68.8[a]	40.0[a,b]	46.3[a,b]	42.7[a,b]	2.6	20.2*	12.8
					55-74			61.5[a]			33.6[a,b]			14.5
		Ikram et al., 2015[d]	PHQ-9 (≥10 cut off)	Community-based Amsterdam	18-70			24.0[a]						5.8

Country	Type of prevalence	Study	Instrument (cut-off) / Diagnoses	Population	Age (Range/ M±SD)	Turkish (%)			Moroccan (%)			Natives (%)		
						Male	Female	All	Male	Female	All	Male	Female	All
The Netherlands		Ikram et al., 2015[d]	Algorithm PHQ-9	Community-based Amsterdam	18-70			12.9[a]						2.3
	One-month	De Wit et al., 2008	CIDI 2.1 (section E)	General population Amsterdam	18-65			14.9[a]			6.6[a,?]			4.4
		Braam et al., 2010	CIDI 2.1 (section E)	General population Amsterdam	19-82			18.0[a]			6.0[?,?]			5.0
		Schrier et al., 2010	CIDI 2.1 (section E)	General population Amsterdam	47.3±14.2; 49.6±14.4; 54.1±14.6			16.5[a]			5.8[a]			4.1
		Unlu et al., 2014	CIDI 2.1 (section E)	General population Amsterdam	18-55			17.1						
		Unlu et al., 2014	CIDI 2.1 (section E)	General population Amsterdam	18-55			6.7						
	One-year	De Wit et al., 2008	CIDI 2.1 (section E)	General population Amsterdam	18-65			22.4[a]			9.8[a,b]			10.3
		Fassaert et al., 2010	ICPC diagnoses (codes P03, P76)	General practice patients	38.7±11.3; 35.7±9.3; 53.2±18.6			3.3[a]			2.5			2.5
		Schriet et al., 2012	MDD and/or dysthymia CIDI (section E)	General population Amsterdam	47.5±14.1; 49.5±14.5; 54.1±14.8			15.6[a]			4.3[a,b]			9.1
		Schriet et al., 2012	Comorbid depressive and anxiety disorders CIDI (sections E, D)	General population Amsterdam	47.5±14.1; 49.5±14.5; 54.1±14.8			9.8[a]			3.8[b]			2.3

2

Table 2. Continued

Country	Type of prevalence	Study	Instrument (cut-off) / Diagnoses	Population	Age (Range/ M±SD)	Turkish (%)			Moroccan (%)			Natives (%)		
						Male	Female	All	Male	Female	All	Male	Female	All
The Netherlands		Fassaert et al., 2010	DSM-IV diagnoses (codes 296.21-296.24, 296.31- 296.34)	Outpatient and inpatient secondary care	35.4±8.3; 35.3±8.7; 40.6 ± 11.7			27.2			29.6[a]			25.5
	Lifetime	De Wit et al., 2008	CIDI 2.1 (section E)	General population Amsterdam	18-65			31.1[a]			15.2[a,b]			24.8
	Unclear	Fassaert et al., 2010	Severe depression DSM-IV diagnoses (codes 296.21-296.24, 296.31- 296.34)	Outpatient and inpatient secondary care	35.4±8.3; 35.3±8.7; 40.6 ± 11.7			32.1			34.2[a]			30.1
		Fassaert et al., 2010	Recurrent depression DSM-IV diagnoses (codes 296.21-296.24, 296.31- 296.34)	Outpatient and inpatient secondary care	35.4±8.3; 35.3±8.7; 40.6 ± 11.7			27.9[a]			25.4[a]			40.7

Note. Abbreviations: CIDI 2.1 section D = anxiety disorders included social phobia, agoraphobia, panic disorders and generalized anxiety disorders; CIDI 2.1 section E = depressive disorders included major depressive disorder and dysthymia; ICPC = International Classification of Primary Care; MDD = Major depressive disorder; M = Moroccan migrant group; T = Turkish migrant group; [a] Different from the native group; [b] Different from the Turkish group; [?] Non-specified relationship with other groups; [c] Current-prevalence (one week); [d] Current prevalence (two weeks). * Sex difference.

British participants was small and analyses were bivariate (Baltas & Steptoe, 2000). However, 36% (7/19; MQ) of the studies with Turkish samples (Beutel et al., 2016; de Wit et al., 2008; Ikram et al., 2015; Levecque et al., 2009; Morawa & Erim, 2014a; Sariaslan et al., 2014; van der Wurff et al., 2004) and 20% (2/7; MQ) of those with Moroccan samples (Levecque et al., 2009; van der Wurff et al., 2004) found female sex positively related to depressive symptoms.

Age
Above 60% (14/21; MQ) and 80% (7/8; MQ) of the studies examining age in Turkish and Moroccan groups, respectively, found no relationship with depressive symptoms in Belgium (Levecque et al., 2009), the Netherlands (de Wit et al., 2008; Schrier et al., 2013; Selten et al., 2012), Germany (Turkish; Erim, Morawa, Atay, et al., 2011; Mewes et al., 2015; Mewes et al., 2010; Morawa & Erim, 2014a, 2014b; Uslucan, 2005), and UK (Turkish; Baltas & Steptoe, 2000). The remaining studies showed mixed results, with 2 SQ studies stating older age as a predictor of higher depressive symptomatology in Turkish-German (Sariaslan et al., 2014), -Dutch populations (van der Wurff et al., 2004).

SES
Despite the fact that in most studies Turkish and Moroccan individuals, compared with native and with other immigrant groups, had a lower SES (as indicated by education level, employment status, income, and/or homeownership; e.g., Arens et al., 2013; Balkir, Arens, & Barnow, 2013; Braam et al., 2010; Ikram et al., 2015; Levecque et al., 2009; Sariaslan et al., 2014; Schrier et al., 2013; van der Wurff et al., 2004), 63% (20/32; MQ) of the examined associations in the studies with Turkish populations found that SES was not related to, nor predicted depressive symptoms. Especially education level and income in Turkish-German, -Dutch and -Belgian samples were often not related to depression (Arens et al., 2013; Balkir, Arens, & Barnow, 2013; Balkir, Arens, Wolff, et al., 2013; Braam et al., 2010; de Wit et al., 2008; Erim, Morawa, Atay, et al., 2011; Levecque et al., 2009; Morawa & Erim, 2014a; Schrier et al., 2013; Uslucan, 2005; van der Wurff et al., 2004). Unemployment was not related to depressive symptoms in 50% of cases (MQ; Levecque et al., 2009; Mewes et al., 2015; Mewes et al., 2010; Morawa & Erim, 2014b; Schrier et al., 2013). A quarter of the associations (8/32; MQ) found that SES appeared related to higher depressive symptomatology in mostly Turkish clinical samples (Bengi-Arslan, Verhulst, & Crijnen, 2002; Beutel et al., 2016; Erim, Morawa, Atay, et al., 2011; Morawa & Erim, 2014a, 2014b). Summarizing the results for Turkish populations, only 25% of the findings showed that SES factors were related to higher levels of depression (see Table 4).

All of the examined associations (11/11, MQ) in Moroccan-Belgian and -Dutch community samples found no relationship of depressive symptoms with education level (Braam et al., 2010; de Wit et al., 2008; Levecque et al., 2009; Schrier et al., 2013), employment status (Levecque et al., 2009; Schrier et al., 2013), income, or home ownership (Braam et al., 2010; de Wit et al., 2008; Levecque et al., 2009; van der Wurff et al., 2004).

Table 3. Pooled One-month Prevalence of Depression per Group, based on Data from the Included Population Studies in the Netherlands

Study	Turkish			Moroccan			Natives		
	n depression	N	Prevalence (%) of depression (95% CI)	n depression	N	Prevalence (%) of depression (95% CI)	n depression	N	Prevalence (%) of depression (95% CI)
De Wit et al., 2008 (35)	37	213	14.9 (10.7 – 20.4)	12	191	6.6 (3.9 – 11.1)	15	320	4.4 (2.6 – 7.3)
Braam et al., 2010 (34)	36	202	18.0 (13.1 – 23.7)	11	180	6.0 (3.4 – 10.7)	16	309	5.0 (3.2 – 8.3)
Schrier et al., 2010 (33)	35	213	16.5 (12.0 – 22.0)	11	191	5.8 (3.2 – 10.1)	13	321	4.1 (2.4 – 6.8)
Ünlu et al., 2014 (62)	36	210	17.1 (12.6 – 22.9)						
Pooled one-month prevalence	144	838	17.2 (14.8 – 19.9)	34	462	6.1 (4.4-8.4)	44	950	4.7 (3.5 – 6.2)

Note. Abbreviations: CI = Confidence interval.

Marital status
Most examined associations showed that marital and household status were not related to depressive symptoms in Turkish (6/10, MQ) and Moroccan (2/3; SQ) samples (Balkir, Arens, & Barnow, 2013; Balkir, Arens, Wolff, et al., 2013; Erim, Morawa, Atay, et al., 2011; Levecque et al., 2009; Mewes et al., 2010; Ünlü Ince, Fassaert, et al., 2014). In two SQ studies, being single or living alone showed a detrimental effect in older Moroccan-, Turkish- Dutch (van der Wurff et al., 2004), and community and clinical Turkish-German samples (Morawa & Erim, 2014a).

Role performance/disability
One SQ study showed that, in elderly from community samples, physical limitations and chronic illness predicted a higher level of depression (van der Wurff et al., 2004). This finding was not ethnicity-related, but the effect of physical limitations was less strong for the Turkish groups (van der Wurff et al., 2004). Depression severity was related to lower daily functioning only among elderly Moroccan-Dutch in one MQ study (Reijneveld, Spijker, & Dijkshoorn, 2007), and predicted functional disability in all ethnic groups in other MQ study (no ethnicity interaction effect), also after controlling for age, sex and education (Schrier et al., 2010).

Ethnocultural factors

Ethnicity
Besides the earlier described prevalence studies, the majority of studies with Turkish (5/7; MQ) and Moroccan (3/5; MQ) samples, that explicitly included the variable ethnicity in their multivariate models, showed that ethnicity was a salient predictor of depressive symptoms, depressive disorders or risk of depression treatment. Ethnicity appeared an equally or more

important factor than other correlates, such as gender, age or SES (Beutel et al., 2016; de Wit et al., 2008; Sariaslan et al., 2014; Selten et al., 2012; van der Wurff et al., 2004). This was the case in the German and Dutch general population (de Wit et al., 2008; Selten et al., 2012), and clinical (Selten et al., 2012), and general practice samples (Sariaslan et al., 2014). In Belgium, ethnicity was not related to depressive symptoms in a study excluding natives (Levecque et al., 2009).

Religion
Three (average MQ) studies found that positive religious behaviors and coping were not associated with depressive symptoms in Turkish-Dutch and –German community and general samples (Braam et al., 2010; Ikram et al., 2016; Uslucan, 2005). Two SQ studies showed that Moroccan-Dutch practiced religion the most, which was strongly related to a lower level of depression (Braam et al., 2010; Ikram et al., 2016). Some types of negative religious coping were predictors of depressive symptoms for both ethnic groups (Braam et al., 2010).

Social support
Half of the variables (4/8; SQ) examined in five studies with Turkish-Belgian, and -Dutch general population samples showed a negative relationship between social support and depressive symptoms (Ikram et al., 2016; Levecque et al., 2009; Uslucan, 2005). In particular, time spent with and the number of same-ethnic friends predicted indirectly lower levels of depression symptoms (Ikram et al., 2016). Problems of members within the social network predicted higher depressive symptomatology (MQ; Bengi-Arslan et al., 2002). The results for Moroccan populations were scarce and inconclusive. General social support predicted lower depressive symptomatology in a Moroccan-Belgian sample (Levecque et al., 2009), but more contact with same-ethnic people than with natives increased the odds for depressive symptoms for older, Moroccan-Dutch individuals (van der Wurff et al., 2004).

Acculturation
Acculturation is defined as the complex, multidimensional, and individual process of psychological and social adjustment to a new cultural context (Berry, 1997, 2005; Bhugra, 2005). Berry's (1996) bidimensional model of acculturation is one of the most influential frameworks delineating two separate dimensions: maintenance of the culture of origin (maintenance) and identification and adaptation to the receiving culture (participation). The combination of these dimensions results in four acculturation strategies: integration (high maintenance- high participation,), assimilation (low maintenance- high participation), separation (high maintenance- low participation), and marginalization (low maintenance- low participation).
    We examined 15 studies with Turkish and four studies with Moroccan populations on acculturation. Some of these studies also used unidimensional (one spectrum ranging from unacculturated to acculturated) or multidimensional (single, separate dimensions of acculturation) models (M. D. Thomson & Hoffman-Goetz, 2009), or proxy variables of acculturation (e.g. receiving

Table 4. Box Analysis of Variables Examined in Relation to Depressive Symptoms

Category	Factor	Subscale	Association* (+, -, 0, ?) / Average quality per association type		
			Turkish	Moroccan	Native
Psychological characteristics	Personality	Neuroticism	+ / 2	+ / 2	+ / 2
		Extraversion	- / 2	- / 2	- / 2
		Openness	- / 2	- / 2	- / 2
		Consciousness	0 / 2	0 / 2	0 / 2
		Agreeableness	- / 2	- / 2	- / 2
	Emotion regulation	Emotional intelligence	- / 3[a]	-/3[a]	
		Emotional avoidance	+ /3		
		Cognitive reappraisal	- / 3 0 / 3		- / 3 0 / 3
		Expressive suppression	+ /3 - / 3		+, + / 3
	Self-esteem		- / 3		
	Sense of coherence	Appraissal of the world as comprehensible, manageable and meaningful	-/ 2		
	Autonomy	Independent self	- / 3		- / 3
		Autonomy-satisfaction	- / 3		+ / 3
	Relatedness	Interdependent self	- / 3		- / 3
		Relatedness-satisfaction	- / 3		0 / 3
	Comorbid factors	Forced marriage	+ / 3[a]		
		Trauma/PTSS	+, +[a] / 2.5		
		Quality of life	- / 2		-/ 2
		Perceived stress	+[c] / 2		
Socio-demographic factors	Sex	Female	+, +, +, +, +, +/ 1.7, 0, 0, 0, 0, 0, 0, 0, 0[a]/ 2.3 ?, ?, ?, ?, ? / 1.4	+, +/ 1.5, 0, 0, 0, 0 / 2.3. ? /1	+, + /1 0, 0, 0, 0, 0, 0, 0 / 2
		Not specified	0 / 1	0 / 1	
	Age		+, +, + / 1.7 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0[a] / 1.8 ?, ?, ?, ? / 1.5	+ /1 0, 0, 0, 0, 0, 0, 0 / 1.7	+, + /1 0, 0, 0, 0, 0, 0, 0 / 1.9
	SES	Combined variable	- / 3		
		Education	-, - / 1.5 0, 0, 0, 0, 0, 0, 0, 0, 0 / 2.3 ?, ?, ? / 1.7	0, 0, 0, 0, / 1.5	0, 0, 0, 0, 0, 0, 0, 0, 0 / 2

Table 4. Continued

Category	Factor	Subscale	Turkish	Moroccan	Native
			Association* (+, -, 0, ?) / Average quality per association type		
		Not specified education	+ / 1		
		Unemployment	+, + / 2 0, 0, 0 / 2 ? / 2	0, 0 / 1.5	0 / 2
		Not specified employment status	+ / 1 0[a] / 2		0 / 1
		Income (univariate, low)	0, 0, 0, 0, 0 / 1.4	0, 0, 0, 0 / 1.3	0, 0 / 1.5
		Negative financial indicator (financial problems, poor housing, no home ownership)	+ / 2 0, 0 / 1.5	0 / 2	
	Marital status	Not specified	+/ 1 0, 0 / 2 ? / 2	0 / 2	0, 0 / 2
		Single/living alone	+, + / 1 0, 0, 0, 0[a]/ 2	+ / 1 0 / 1	+ / 1 0 / 3
		Marriage duration	0 / 3		
		Poor marriage quality, marriage problems	+, +, + / 2.3 0, 0 / 3		
	Role functioning/ disability	Physical limitations	+ / 1	+ / 1	+ / 1
		Chronic illness	+ / 1	+ / 1	+ / 1
		Physical activity	? / 2		
		Daily functional performance	0[a] / 2 + / 2	+[a], + / 2 + / 2	0[a] /2 + / 2
Ethnocultural factors	Ethnicity		+, +, +, +, + / 2 0,0, / 3	+, +, +/ 1.7 0,0 / 2.5	0, 0, 0, 0, 0 / 2
	Religiousness	Positive religiosity all types	0[a] , 0, 0, 0 / 1.5	-, - / 1 0 / 1	
		Positive coping	0 / 1	0 / 1	
		Practicing religion	0[a] / 3		
		Daily prayer	0 / 1	- / 1	
		Service attendance	0 / 1	- / 1	
		Negative coping all types	+, +/ 1 0, 0, 0 / 1	+, +/ 1 0, 0, 0 / 1	
		Negative – coping without God	0 / 3	0 / 3	
		Negative – doubt about God	0 / 3	0 / 3	

Table 4. Continued

Category	Factor	Subscale	Association* (+, -, 0, ?) / Average quality per association type		
			Turkish	Moroccan	Native
		Negative – anger at God	+ / 3	0 / 3	
		Believe being punished by God	0 / 3	+ / 3	
		Believe being abandoned by God	+ / 3	+ / 3	
	Social support	All types	-, -, -, -/ 1.5 0, 0, 0, 0/ 1.8	- / 2 + / 1 0, 0 / 1	
		Available	- / 3		
		Perception of social support	- / 1	- / 2	
		From friends and neighbors	0 / 2		
		From family members	0 / 2		
		In the spare time	0 / 2		
		Same-ethnic contact [d]	-, - / 1 0 / 1	+ / 1 0, 0 / 1	
		Problems within social network (psychological, medical treatment, departure, incarceration of family member)	+, +, + / 2 0 / 2		
	Acculturation	Univariate	-[a, c] / 3 0[a] / 3		
		All participation (incl. assimilation, integration, skills, social integration)	+[a] / 3 -[a], -[a], -, - / 2	0[a], 0[a] / 2	
		All maintenance (incl. separation, marginalization, traditions, norms and values, feelings of loss, homesickness, same ethnic-contact)	+[a], +[a], +, +, +, +, +, +, + / 1.8 0[a], 0[a], 0[a], 0[a], 0 / 1.8 -, - / 1	0[a], 0[a], 0[a], 0, 0, 0, 0, 0, 0 / 1.3 + / 1	
		Ethnic identity	-[b], 0[a] / 1.5	0 / 1	
		Language proficiency	- / 2 0, 0, 0 / 1.3		
		Age of migration	0,0 / 1.5		
		Stay duration	0, 0, 0, 0, 0 / 2.2		
	No possibility to return to home country		+ / 1	0 / 1	

Table 4. Continued

Category	Factor	Subscale	Turkish	Moroccan	Native
			Association* (+, -, 0, ?) / Average quality per association type		
	Migrant status		0 /2		
	Generation	First	+ / 2 0 / 1	0 /2	
		Second	+ / 3	+ / 3	
		Not specified	?, ? / 1		
	Perceived ethnic discrimination	All types	+, +, +, +, +, +/ 1.3 0, 0 / 1	+, +, + / 1	
		Not specified discrimination	+, + / 1	+ / 1	
		Personal-level	+ / 1	+ / 1	
		Group-level	0 / 1	+ / 1	
		Open aggression	+ / 2		
		Passive /subtle discrimination (i.e., paternalism)	+ / 2		
		Everyday discrimination (neighborhood, doing groceries, at work, in public institutions)	+ / 2 0 / 1		

Note. [a] Bivariate analysis, [b] Moderating effect, [c] Mediating effect, [d] Variable also considered as part of acculturation -maintenance. 0 = non-significant association; - = negative association with depressive symptoms (protective factor), + = positive association with depressive symptoms (risk factor), ? = not specified; 1-1.4 = strong quality (SQ), 1.5-2.4 = moderate quality (MQ), 2.5-3 = weak quality (WQ). Abbreviations: SES = Socioeconomic status.

country language proficiency). Whenever possible, we related the variables to the main 'maintenance' and 'participation' dimensions, according to Berry's (1996) bidimensional model (e.g., the multidimensional acculturation component 'social integration', was considered 'maintenance' when its level was low, and 'participation' when its level was high).

Turkish-Dutch outpatients showed the least well-acculturated position (least skills, lowest social integration, most maintenance of cultural norms, values, traditions, and feelings of loss) compared to Moroccan- and Surinamese-Dutch outpatients (Nap et al., 2015). A third of the examined associations (9/23, MQ) showed that maintenance acculturation strategies (Morawa & Erim, 2014a; Nap et al., 2015; Ünlü Ince, Fassaert, et al., 2014; Uslucan, 2005) were related to or predicted higher risk or levels of depressive symptoms in Turkish-Dutch, and –German, community and clinical samples, also after correction for SES (Morawa & Erim, 2014a; Ünlü Ince, Fassaert, et al., 2014). Only maintenance social support aspects, like spending leisure time with same-ethnic people, predicted lower depression severity (Ikram et al., 2016). An additional 20% of the examined associations (4/21; MQ) in Turkish samples showed that participation acculturation strategies predicted lower risk or lower level of depressive symptomatology in similar samples (Morawa & Erim, 2014a; Nap et al., 2015; Schmitz & Schmitz, 2012; Ünlü Ince, Fassaert, et al., 2014).

Other acculturation variables, such as age of migration (Morawa & Erim, 2014a, 2014b), duration of stay in the receiving country (Beutel et al., 2016; Erim, Morawa, Atay, et al., 2011; Morawa & Erim, 2014a, 2014b; Uslucan, 2005), and receiving-country language proficiency (Bengi-Arslan et al., 2002; Morawa & Erim, 2014b; Sariaslan et al., 2014), did mostly not predict depressive symptoms in Turkish community or general practice samples.

Moroccan-Dutch patients showed a medium-high degree of participation and maintenance and held a middle position between Turkish- and Surinamese-Dutch (Nap et al., 2015). Above 90% of the examined associations (13/14; SQ) showed that neither acculturation style, nor acculturation variables, nor ethnic identity of Moroccan-Dutch patients were associated to or predicted depressive symptoms (Ikram et al., 2016; Nap et al., 2015; van der Wurff et al., 2004).

First generation, stronger (Turkish) ethnic identity, better (Turkish) ethnic language proficiency, lower receiving-country language proficiency, lower education level, lower income, and older age were related to maintenance, separation or marginalization strategies (Gul & Kolb, 2009; Morawa & Erim, 2014a). Contrarily, longer lasting intimate relationships, younger age, higher education level (Ünlü Ince, Fassaert, et al., 2014), second generation (Morawa & Erim, 2014a), and higher emotional intelligence (Schmitz & Schmitz, 2012) were associated to participation acculturation strategies. Female sex was associated to lower participation in a clinical German sample (Morawa & Erim, 2014a), but it was unrelated in a Dutch, employed, community sample (Ünlü Ince, Fassaert, et al., 2014).

Generation
Five studies showed inconclusive trends (Ikram et al., 2016; Ikram et al., 2015; Levecque et al., 2009; Morawa & Erim, 2014a; Selten et al., 2012), though the only SQ study found no association

between first generation and depressive symptoms in a Turkish and Moroccan community sample (Levecque et al., 2009).

Discrimination
Perceived ethnic discrimination has been defined as the perceived unfair treatment related to ethnic background (Williams & Mohammed, 2009). Most studies (4/5; SQ) with Turkish-, and two SQ studies (2/2) with Moroccan population showed a strong association between different types of (perceived) discrimination and (higher) depressive symptomatology, also after controlling for socio-demographic variables (Ikram et al., 2016; Ikram et al., 2015; Mewes et al., 2015; Morawa & Erim, 2014b; van Dijk et al., 2011). Near 25% of the depression prevalence was related to perceived discrimination, controlling for other socio-demographic variables (Ikram et al., 2015). Perceived personal-level discrimination predicted up to three times higher depression prevalence in young, mostly second-generation, mid-highly educated, Turkish, and Moroccan-Dutch individuals of community samples. This association was stronger for Moroccan-Dutch, for whom perceived group-level discrimination at school also predicted depressive symptoms (van Dijk et al., 2011). Only one MQ study with a community sample of Turkish-German people found that perceived discrimination was not related to depression severity, despite the higher report of discrimination experiences (Morawa & Erim, 2014b).

Religion weakened the association between perceived discrimination and depressive symptoms of Moroccan-Dutch (Ikram et al., 2016). A strong ethnic identity of Turkish- and Moroccan-Dutch immigrants did not affect the relationship between daily perceived discrimination (overt and subtle) and depressive symptoms (Ikram et al., 2016), but it canceled the indirect association between paternalism and depressive symptoms for mid-highly educated, Turkish-German with high Turkish identification (especially ethnic pride; Mewes et al., 2015).

Discussion

This systematic review aimed to synthesize and evaluate the existing empirical literature on the prevalence and correlates of depressive disorders and symptoms in two of the largest immigrant groups in Europe, namely the Turkish and Moroccan communities. Doing so, we used whenever possible an intersectionality approach by highlighting the more vulnerable as well as the most resilient subgroups within these populations related to the interaction of socio-demographic, psychological and/ or ethnocultural factors.

Regarding the prevalence, it is difficult to draw robust conclusions, especially for the Moroccan population. Even though the average quality of the epidemiological studies was moderate, the external validity of the findings was suboptimal due to low response rates, exclusive urban settings, and immigrant samples mainly comprising first-generation respondents. Taking these limitations into consideration, the results provided evidence that

Turkish immigrants (with the strongest evidence for Turkish-Dutch, and -German older adults, women, and outpatients with psychosomatic complaints) consistently showed the highest (three-fourfold) prevalence of current and one-month depressive disorder compared to natives and, in some studies, to Moroccan and other immigrant groups. Their one-year and lifetime prevalence were also higher than those of native and Moroccan-Dutch.

The general picture that arose from the Dutch data regarding one-month and one-year prevalence of depressive disorders in Moroccan-Dutch is that they showed prevalence rates similar (rather low) to those of the native Dutch. Moroccan-Dutch also had lower lifetime prevalence than the natives. Some exceptions were found for specific subgroups such as patients with severe depression and older adults. Also, Moroccan- Belgian had higher prevalence of depressive symptoms than their native counterparts.

The findings that Turkish immigrants had overall elevated prevalence rates of depression and that Moroccan immigrants, including young men, had rather moderately (or not elevated at all) prevalence rates were remarkable. A recent international study showed that the lifetime-prevalence of major depressive episode was 14.1% in Belgium, 9.9% in Germany and 17.9% in The Netherlands (based on communiy samples; Kessler & Bromet, 2013). Contrasting with these figures, though not all too well comparable, the pooled one-month prevalence of Turkish immigrants (mainly patients) was well above the German prevalence. In the Netherlands the prevalence of Turkish immigrants laid above, and the prevalence of Moroccan immigrants laid under the reported prevalence of 17.9%. In Belgium, the current prevalence of depressive symptoms in both Turkish and Moroccan immigrants was about the same as the lifetime prevalence found in the international study; however, this may indicate that the lifetime prevalence of the Belgian immigrant population is higher.

Comparing the prevalence rates presented in this review with the rates in Turkey and Morocco, Turkish immigrants showed a higher one-year prevalence than Turkish in Turkey (8.2%; Topuzoglu et al., 2015). The opposite was found for the Moroccan group. Moroccan immigrants also reported lower rates of depression than Moroccans in Morocco, who showed a point prevalence of depressive disorders of 26.5% in a community sample (Kadri et al., 2010) and 13.7 % in the general practice (Oneib, Sabir, Abda, & Ouanass, 2015). There are authors that sustain that the level of depression of immigrant populations is not only related to adversity during migration, but also to adversity in the place of origin, before the migration (e.g., Missinne & Bracke, 2012). The finding that Turkish immigrants showed higher levels of depression compared to Moroccan immigrants might be comprehensible considering that in the more recent decades, Turkey has faced more political instability (including persecution of some groups) than Morocco (Miller, 2013; Zürcher, 2017), which might have affected the mental health of the immigrants- to be. Other explanation might be that the symptoms of Moroccan immigrants are currently encapsulated in other disorders because (cultural) diagnostic problems. Recent studies showed that there is a tendency to under-detect mood symptoms and over-detect positive psychotic symptoms in Moroccan-Dutch at risk for psychosis (Veling, Selten, Mackenbach, & Hoek, 2007; Velthorst et al., 2012), and that using a culture-sensitive assessment instrument can help

correcting the diagnostic bias in Moroccan-Dutch (Zandi, Havenaar, Laan, Kahn, & Brink, 2016).

The prevalence in the Dutch general practice (based on GP's assessment) was much lower compared to the prevalence in general or clinical samples and also compared to the German general practice (based on BDI's cut-off). This finding is consistent with literature discussing underdiagnosis of moderate and severe cases of depression in the general practice, especially based on clinical interviews (Wittchen, Mühlig, & Beesdo, 2003). Contextual factors (differences between the Dutch and German mental health care system) might also be explanatory.

There is a possibility that the prevalence results are related to the methodological heterogeneity of the studies. We used the studies based on the CIDI to calculate the pooled 1-month prevalence in the Netherlands. Though these analyses showed an acceptable comparability, the CIDI has construct, method and item bias in the elderly members of the target groups (Smits, de Vries, & Beekman, 2005). Among others, the CIDI does not assess non-Western manifestations of depression (Sempértegui et al., 2019). The cross-cultural properties of the other used instruments (e.g., BDI, PHQ-9, HADS) for Turkish-and Moroccan immigrants are unknown, except for the CES-D, which shows good convergent validity and reliability but another factor structure compared to the original structure and some item bias (Spijker et al., 2004). Currently, there is only some mixed evidence that despite the higher depressive symptomatology, Turkish, and Moroccan-Dutch report the same functional impairments as natives (Reijneveld et al., 2007; Schrier et al., 2010). Normative cut-offs of instruments to establish caseness, severity and functional impairment are still lacking. All these persisting methodological shortcomings plead for more research and assessment development on these aspects.

Research on correlates of depression for Turkish and Moroccan immigrant groups was available, but it had the important drawback that many factors were only examined once, which greatly hampered the reliability of the conclusions. The most abundant and strongest evidence was found for socio-demographic factors and also some ethnocultural aspects, such as ethnicity, acculturation strategy, and perceived ethnic discrimination. It is worth noting that individual psychological correlates were scarcely examined, mostly in Turkish samples, and in rather low-quality studies. For Turkish community individuals, we found some indications for positive associations of homesickness, and high neuroticism (strong effect), and low extraversion, consciousness, and agreeableness with depressive symptomatology. On the other hand, social support, satisfaction with relatedness, self-esteem, emotional intelligence, and flexible use of emotion regulation strategies (both expressive suppression and cognitive reappraisal) related negatively to depressive symptoms, especially for Turkish-German women. In clinical Turkish samples, feelings of loss were positively, whereas an interdependent self-construal, and sense of coherence were negatively related to depressive symptomatology. For Moroccan groups, high neuroticism, low extraversion, low consciousness, low agreeableness (strong effect), and same-ethnic contact predicted depressive symptoms. Other types of social support predicted lower levels of depressive symptoms.

Regarding socio-demographic and ethnocultural factors, ethnicity was relatively one of the most consistent factors associated with or predictive of depression in Turkish and Moroccan

communities (also taking the prevalence studies into account). Socio-demographic factors such as female sex and being single or living alone appeared seldom, positively related to depressive symptoms in Turkish samples, and they were mostly unrelated to depressive symptoms in Moroccan samples. SES, age, and migration generation appeared least frequently related to depressive symptoms in both groups. For two reasons this was unexpected. First, most included studies showed a higher report of SES strains in Turkish and Moroccan than in natives or other immigrant groups. Second, international evidence points to strong associations of female sex, low SES position, older age, and first generation with increased rates of depression (e.g.,Kessler & Bromet, 2013; Levecque & Van Rossem, 2015; Missinne & Bracke, 2012). Possible explanations for the unexpected findings could lie in quality and methodological artifacts. In this review, SQ studies with larger and more representative samples, and studies examining models with only socio-demographic correlates more often found that female sex and SES variables were predictors of depressive symptoms. In addition, the small variability of SES factors (floor effect) may have hampered some analyses. Also, studies examining models including ethnocultural correlates and other variables such as personality or sense of coherence showed that socio-demographic factors were unrelated to, or only had a limited direct relationship with depressive symptomatology. Socio-demographic factors seemed to play a stronger mediating or moderating role related to, or leading to depressive symptomatology, through other factors such as exclusion, isolation or adaptation problems (Missinne & Bracke, 2012). However, the evidence on the moderating and mediating role of socio-demographic factors is too scarce to draw any strong conclusion.

An important finding that emerged was that perceived discrimination was a common experience of Turkish- and Moroccan-Dutch, especially young adults. Ethnicity predicted perceived discrimination (overt or subtle), which subsequently appeared as an utterly salient, strongly predictive factor of depressive symptomatology. The relationship was direct and indirect through lower religiousness (for Moroccan) and perceived stress, which according to the authors may arise due to incompatibility between internal (being German) and external self-perception (Turkish immigrant), especially among those reporting low Turkish ethnic identity (Mewes et al., 2015). This finding is congruent with the extended literature associating chronic stress due to experiences of discrimination and other factors common to immigrant populations, such as low SES, social isolation, and integration problems, with poor mental and physical health (e.g., Pascoe & Smart Richman, 2009; Williams & Mohammed, 2009). Studies have shown that biological dysregulation of the stress systems due to sustained exposure to stressors might be partly responsible for the negative effects on health (see for more information Berger & Sarnyai, 2015; Kristenson, Eriksen, Sluiter, Starke, & Ursin, 2004; Seeman, Stein Merkin, Karlamangla, Koretz, & Seeman, 2014).

In this review, evidence showed that the acculturation process and their associations with depressive symptoms differed per immigrant group. In line with acculturation research (C. Ward, 2008), low levels of maintenance acculturation strategies and high levels of participation strategies were most related to lower depressive severity among Turkish community samples.

The notion that the combination of both lower maintenance and high participation acculturation strategies might be the most protective acculturation strategies for Turkish immigrant population is important, given that there are reports that this group currently tends to adopt maintenance strategies (Nap et al., 2015). Our finding that duration of stay and receiving-country language proficiency did not predict depressive symptoms might be due to studies excluding respondents who did not master the receiving-country language (e.g. Beutel et al., 2016; Nap et al., 2015). The acculturation style of Moroccan-Dutch patients appeared unrelated to depressive symptoms, possibly because of their already mild acculturation style, less oriented to their own group and more to the receiving society (compared to the Turkish-Dutch style; Nap et al., 2015).

Implications for clinical practice

Prevalence and diagnostics
Compared to natives, specific Turkish subpopulations that had a higher prevalence of depressive disorders and symptoms were women, older adults, and clinical populations; whereas vulnerable Moroccan subpopulations were elderly and patients with severe depression (de Wit et al., 2008; Schrier et al., 2010; van der Wurff et al., 2004). Clinicians are advised to ask about symptoms of depression in these groups in particular. The lower prevalence rates in the Dutch general practice (Fassaert, Nielen, et al., 2010) commends attention for the diagnostics of depressive disorders, especially among men, in this setting. We also recommend clinicians to pay attention to also highly prevalent comorbid anxiety (Schrier et al., 2012), other depressive disorders, and somatoform and posttraumatic stress disorder (Erim, Morawa, Ozdemir, et al., 2011; Fassaert, Peen, et al., 2010), which have been related to more severe and persistent psychopathology (Schrier et al., 2012) and to negative treatment outcomes (Mösko, Pradel, & Schulz, 2011; Nap et al., 2015). Using available assessment instruments such as the DSM-5 Cultural Formulation Interview (APA; 2013) besides standardized diagnostic instruments to assess depressive symptoms might be advisable to improve recognition of symptoms and other relevant factors.

Psychological factors
Based on the results on correlates related to lower levels of depressive symptoms among Turkish populations, interventions aimed at reinforcing a combined interdependent and independent self-construal (Balkir, Arens, Wolff, et al., 2013) as well as both satisfaction with autonomy and relatedness (Balkir, Arens, & Barnow, 2013) could be pursued in therapy. Additionally, the treatment for depression for Turkish immigrant populations might be enriched by training to learn balancing cognitive reappraisal and expressive suppression as emotional strategies (Arens et al., 2013). Interventions seeking self-empowerment (including a stronger sense of coherence) could be introduced, always in careful agreement with the patients, their environment, and the expectations of other parties involved. It also seems advisable to pay attention to signs of homesickness (Uslucan, 2005), feelings of loss (Nap et al., 2015), and/or traumatic experiences (Kizilhan, 2015; Tagay et al., 2008), especially among older, Turkish, labor immigrants and their spouses.

Socio-demographic factors

Even though this effect was present on its own, studies showed that both groups also faced many social strains (e.g., unemployment, lower education, lower income; Arens et al., 2013; Balkir, Arens, & Barnow, 2013; Braam et al., 2010; Ikram et al., 2015; Levecque et al., 2009; Sariaslan et al., 2014; Schrier et al., 2013; van der Wurff et al., 2004). Exploration of the patients' SES situation and how it relates to their daily life and experience of depression seems of added value in clinical practice in order to select possible targets of therapeutic interventions. Additionally, clinicians might do well to keep in mind that some SES factors might be more relevant for Turkish women (e.g., financial problems) or for Turkish men (e.g., being unemployed; Bengi-Arslan et al., 2002). As (marital) relationships appeared to be somewhat negatively related to depressive symptoms (Morawa & Erim, 2014a; van der Wurff et al., 2004), whereas marital conflicts were related to higher depressive symptomatology (Baltas & Steptoe, 2000; Bengi-Arslan et al., 2002), therapeutic strategies could be examined to cope with (cultural) differences and inherent stress in marriage and other intimate relationships.

Ethnocultural factors

Turkish and Moroccan ethnicity appeared related to higher depression severity (Beutel et al., 2016; de Wit et al., 2008; Sariaslan et al., 2014; Selten et al., 2012; van der Wurff et al., 2004). Moroccan-Dutch elderly appeared as a vulnerable population (van der Wurff et al., 2004) that might need more support to lead a healthy and functional life (Reijneveld et al., 2007). Furthermore, interventions aimed at improvement of the social network (Bengi-Arslan et al., 2002), social support (including same-ethnicity contacts for Turkish populations; Ikram et al., 2016; Levecque et al., 2009; Uslucan, 2005) might be a valuable addition to evidence-based treatments. Also, examining how patients could include helpful religious aspects in their daily life could be important, especially for Moroccan-Dutch (Braam et al., 2010; Ikram et al., 2016).

Acculturation

Depression treatment and prevention might benefit from reinforcing (Turkish) immigrant patients' skills and social participation in the receiving society (Morawa & Erim, 2014a; Nap et al., 2015; Schmitz & Schmitz, 2012; Ünlü Ince, Fassaert, et al., 2014), while also reinforcing their ethnocultural social network (Ikram et al., 2016). Especially certain groups of patients might need more support developing an orientation to the receiving culture but might also profit the most of it: first generation patients, lower receiving-country language proficiency, lower education level, lower income, older age (Gul & Kolb, 2009; Morawa & Erim, 2014a; Ünlü Ince, Fassaert, et al., 2014), and lower emotional intelligence (Schmitz & Schmitz, 2012).

Discrimination

Evidence stemming from community samples showed that the negative impact of perceived ethnic discrimination on depression (prevalence) was strong (Ikram et al., 2016; Ikram et al., 2015; Mewes et al., 2015; Morawa & Erim, 2014b; van Dijk et al., 2011). Clinical and, more

importantly, social efforts to reduce or eradicate discrimination could contribute to the prevention and/or recovery of depression among Turkish and Moroccan immigrant populations (e.g., Ikram et al., 2016; Nwabuzo & Schaeder, 2016). Factors that appeared to weaken the association between perceived ethnic discrimination and depression were: a strong ethnic identity (Mewes et al., 2015), emotional intelligence (Schmitz & Schmitz, 2012), practicing religion (for Moroccan individuals; Ikram et al., 2016), and a same-ethnic network (for Turkish individuals; Ikram et al., 2016). These aspects could be reinforced in therapeutic contacts.

Strengths, Limitations, and Research Recommendations

To our knowledge, ours is the first review addressing depressive symptoms and disorders of large (Turkish and Moroccan) immigrant populations in Europe, with explicit attention for intersectionality, meaning the combination of psychological, sociodemographic, and ethnocultural factors that point towards more vulnerable as well as resilient subgroups within these populations. We excluded studies analyzing Turkish and Moroccan individuals together, which is an understandable practice to increase statistical power, but the presumption that both groups behave similarly was shown in this review to be invalid. Due to our method, that also evaluated the quality of the studies per ethnic group, we could compare these groups with similar migration history and make their uniqueness clear. Furthermore, the literature was systematically reviewed and the methodological quality of all included papers was assessed with a standardized checklist of predefined quality criteria by the authors. Finally, this review also aimed to bridge the gap between research and practice by providing possible interventions for clinical practice based on the discussed findings.

This review has also some limitations. Despite the open language search strategy, no papers from Spain, France or Italy met inclusion criteria, which are countries with a large Moroccan immigrant population. This aspect limited the conclusions that might be drawn on an European level and changed the focus of our paper to Western Europe only. Furthermore, only a few studies were comparable based on the type of prevalence, the instruments used, and the population assessed, which only allowed a descriptive method to evaluate the (pooled) prevalence. Additionally, important topics fell out of the scope of the current review, such as depression related to somatic illnesses, suicide ideations, and a more broadly discussion of comorbid disorders and symptoms like anxiety and post-traumatic stress disorder, which are possibly also relevant for an adequate estimation of prevalence figures and mental health care aspects in these groups (Sempértegui et al., 2019). Also, none of the included studies differentiated between immigrant populations and self-defined ethnicity (i.e., self-report on sense of belonging to the receiving or the background culture; Bhopal, 2004), even though prevalence figures have been found to differ between these two groups in Europe (Missinne & Bracke, 2012). In addition, this review focused merely on the correlates of depressive symptoms and disorders, thus drawing conclusions about causality is not possible. We neither included sociological studies examining the relationship of social inequities with power dynamics at the individual, institutional, global, or socio-historical levels, which is an important anchor of

intersectional theory (López & Gadsden, 2016). Furthermore, only few studies examined mediating or moderation effects of the psychological, socio-demographic, and ethnocultural factors in relation to depressive symptomatology, which limited the conclusions on the intersectional level.

In light of the above-mentioned results, strengths and limitations, some recommendations for future research are possible. First, future research should extend the cross-cultural psychometric knowledge of instruments used to measure depressive symptoms, as well as related constructs. A mutual agreement on the conceptualization of these constructs, e.g., acculturation strategies, would be helpful. Second, larger external validity and replicability of the findings should be striven for, by including second-generation individuals, considering self-defined ethnicity, mid- highly educated, and sexual minority individuals (concerning whom there is currently a research gap). Doing so, ecological validity and avoiding over-controlling for socio-demographic factors, e.g., income, education level, unemployment, is important. These factors reflect these immigrant populations' reality and are likely to be important mediators or moderators in the association between ethnicity and depressive symptoms, though conclusive remarks cannot be made at this point. Therefore, the psychological, sociodemographic and ethnocultural factors should be taken into account in future intersectionality research of interlocking social identities, with more advanced statistical methods, like multilevel models (C. R. Evans, 2015). Third, extensive and longitudinal clinical studies, like the NESDA (Netherlands Study of Depression and Anxiety; Penninx et al., 2008), but also among immigrant populations, are needed to shed more light about the (individual) psychological, social, biological, genetic factors, and underlying mechanisms affecting the development and the long-term prognosis of anxiety and depression. Finally, some of the discussed findings point towards possible specific therapeutic interventions for Turkish and Moroccan immigrant populations with depressive disorders. These interventions should still be carefully tested for its added value to already existing evidence-based therapies.

To conclude, the mental health of Turkish and Moroccan immigrants with depression has received considerable attention in Europe in the last two decades, in particular targeted at the Turkish groups in Germany, the Netherlands, and Belgium. Prevalence of depression in Turkish immigrants was found to be high, whilst in most Moroccan populations, it was rather similar to the prevalence of natives. Ethnic background and perceived ethnic discrimination were factors with salient links with higher depressive symptomatology in both groups. Future research is still highly warranted in order to achieve evidence-based diagnostics and treatments for these groups. Future studies should in particular target cross-cultural validity of used instruments, replicability of the findings in larger, more representative samples, and longitudinal and evaluative examination of mediating and moderating factors and effects of specific therapeutic interventions.

2

Symptom manifestation and treatment effectiveness, -obstacles and -facilitators in Turkish and Moroccan groups with depression in European countries: A systematic review

Abstract

Objectives

This study examined the state of the art relevant for clinical practice on symptom manifestation of depression or depression-related idioms of distress, the treatment effectiveness and obstacles and facilitators for therapeutic success in Turkish and Moroccan immigrant populations with depression in Europe.

Method

We conducted a systematic search in PsycINFO, MEDLINE, Science Direct, Web of Knowledge, and Cochrane databases (1970- 31 July 2017). Peer-reviewed studies, with adult populations, and an instrument assessing depressive symptoms met inclusion criteria and were evaluated following quality guidelines.

Results

We included 13 studies on symptom manifestation, 6 on treatment effectiveness, and 17 on obstacles and facilitators, published between 2000 and 2017, from Germany, the Netherlands, Austria and Sweden (n Turkish individuals= 11,533; n Moroccan individuals = 5,278; n native individuals = 303,212). Both ethnic groups more often reported combined mood and somatic symptoms (and anxiety in the case of Turkish groups) than natives did and had higher levels of symptoms. There was no report of the effectiveness of pharmacotherapy and there was weak evidence of the effectiveness of examined psychological treatments for depression in Turkish groups. No treatment has been examined in Moroccan groups. Salient obstacles for therapeutic success were socioeconomic problems, a higher level of psychological symptoms at baseline, and negative attitudes towards psychotherapy. Possible facilitators were interventions attuned to social, cultural and individual needs. Results were most representative of first-generation, low SES Turkish immigrant patients, and Moroccan-Dutch members of the general populations.

Conclusion

Turkish and Moroccan immigrants with depression presented a comorbid symptom profile with more intertwined depressive and somatic complaints. There were indications that the available therapies are insufficient for Turkish groups, but the current evidence is scarce and heterogeneous, and RCTs suffer from methodological shortages.

Introduction

The World Health Organization (2017) considers addressing depression as a major public health priority. In Europe, dysthymia and major depressive disorder are among the disorders with the highest impact on disease burden (Alonso et al., 2004). Non-EU immigrant populations in Europe are considered vulnerable populations for developing depression (Missinne & Bracke, 2012; Tarricone et al., 2012). In addition, immigrant populations in Western contexts, such as the United States and Europe, are at risk of receiving less care as well as care that is not well adapted to their needs (Alegria et al., 2008; Derr, 2016; Lindert et al., 2008).

The Turkish and Moroccan immigrant communities are currently among the largest immigrant populations in Europe, making up 7.5% and 5.8% respectively of the total foreign-born EU population (Eurostat, 2017). There are reports that the prevalence of depression in specific subgroups among Moroccan-Dutch, such as older adults (van der Wurff et al., 2004), and in Moroccan immigrants in Belgium is significantly higher than in the native-born population (Levecque et al., 2009). According to our estimations of the one-month pooled prevalence of depressive disorders, Turkish-Dutch immigrants showed a much higher prevalence than Dutch natives (16.6% vs. 4.5%), while the prevalence among Moroccan-Dutch immigrants (6.2%) was closer to that of the native-born. Turkish-German immigrants showed a higher prevalence than their Turkish-Dutch counterparts (21.4%; Sempértegui, Knipscheer, et al., In preparation).

Studies have found some evidence linking factors such as neuroticism (Schrier et al., 2013), low socioeconomic status (SES; Bengi-Arslan et al., 2002; Beutel et al., 2016; Erim, Morawa, Atay, et al., 2011; Morawa & Erim, 2014a, 2014b), and female sex/gender (e.g., Beutel et al., 2016; de Wit et al., 2008; Ikram et al., 2015; Levecque et al., 2009) to higher levels of depression among Turkish immigrants. Among older Moroccan immigrants, factors such as single marital status and same-ethnic social contact were related to more depressive symptoms (van der Wurff et al., 2004). Furthermore, according to our review of the literature (Sempértegui, Knipscheer, et al., In preparation), having a Moroccan or Turkish ethnicity was a salient correlate of depression (e.g., Beutel et al., 2016; de Wit et al., 2008; Sariaslan et al., 2014; Selten et al., 2012; van der Wurff et al., 2004).

Consolidating available knowledge has been considered crucial towards appropriate evidence-based treatments and cultural adaptation models that intend to improve the access, utilization, quality and cost-effectiveness of mental health care for immigrant populations such as the Turkish and Moroccan (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009). Accordingly, the purpose of this article is to synthesize and to critically examine the available knowledge on symptomatic manifestations of depression or depression-related idioms of distress in Turkish and Moroccan immigrant populations in European countries. We also aim to evaluate the documented effectiveness of treatments for depression offered to these populations and the factors enabling or discouraging these treatments. Doing so, we take an intersectional perspective that examines the dynamic interplay between aspects of diversity (e.g., sex/gender, race/ethnicity, age, socioeconomic status) involved in mental well-being and

mental health care for these immigrant groups. From these findings, we also distil evidence-informed clinical strategies that might contribute to a better tailoring of the mental health care for Turkish and Moroccan immigrants with depression.

Mental Health Care for Immigrant Populations

Providing care to immigrant populations, such as the Turkish and Moroccan groups with depression, is not without challenges. The mechanisms of depression and the ways in which depressive symptoms are conceptualized, explained, experienced, expressed and resolved are influenced (among others) by own ethnocultural aspects (Balkir Neftci & Barnow, 2016; Kirmayer, 2012; Office of the Surgeon General, Center for Mental Health Services, & National Institute of Mental Health, 2001), and may vary between immigrant and native populations of receiving countries as well as between immigrant populations and the general population residing in the countries of origin (Deisenhammer et al., 2012). Furthermore, ethnocultural variables in interaction with other diversity aspects, or psychological, biological and social factors, might also influence the symptomatic manifestation of illness, the preferred and optimal therapeutic approach, and the treatment outcomes (Neblett et al., 2016; Office of the Surgeon General et al., 2001; Shaked, William, Evans, & Zonderman, 2016).

Additionally, practitioners' clinical judgment regarding appropriate diagnosis and treatment strategies are also determined by their ethnocultural background (Balkir Neftci & Barnow, 2016; Kirmayer, 2012). Clinical judgement may also be undermined by stereotyped thinking, uncertainty about current clinical guidelines for working with other ethnic populations, or problematic communication due to language barriers or lack of experience working with interpreters (Kirmayer et al., 2011; Lindert et al., 2008; Sandhu et al., 2013; Schraufnagel et al., 2006; Tiemeier et al., 2002; Yeo, 2004). Furthermore, the therapeutic interaction is shaped by the patients' and clinicians' social and power position, which are related to the social and diversity aspects (e.g., age, sex/gender, income, education, religion) that form their (social) identity (Kirmayer, 2012). Also other (often adverse) social factors, such as immigrant generation, perceived discrimination in the receiving country, perceived social position, and acculturation are especially relevant for immigrant populations in clinical practice (Bhugra et al., 2014). For instance, studies have found that a Turkish or Moroccan background (e.g., Sariaslan et al., 2014; Selten et al., 2012) and perceiving ethnic discrimination (e.g., Ikram et al., 2016; Ikram et al., 2015; van Dijk et al., 2011) were predictors of depressive symptomatology (Sempértegui, Knipscheer, et al., In preparation). Also, according to our review of the literature (Sempértegui, Knipscheer, et al., In preparation), high levels of cultural maintenance was related to, or predicted higher levels of depressive symptoms in Turkish groups (e.g., Morawa & Erim, 2014a; Nap et al., 2015), whereas acculturation was not consistently related to depressive symptomatology among Moroccan populations (e.g., Nap et al., 2015; van der Wurff et al., 2004).

Aims of the Review

We know from other studies that the provision of treatment for immigrant populations in general, and also immigrant populations with depressive symptoms, is considered challenging (e.g., Sandhu et al., 2013), and that there are inequities between the mental health care that immigrant populations receive compared to natives (e.g., Derr, 2016). However, we do not know if this also holds for Turkish and Moroccan immigrant populations with depression in Europe. We also do not know what are symptom manifestations of depression in these groups or what are factors associated with their therapeutic success. To contribute to the clinicians' understanding of the characteristics and needs regarding depression and depression treatment of Turkish and Moroccan immigrant groups in Europe, we aim at answering three key questions:

a) What are symptomatic manifestations of depressive disorders or depression-related idioms of distress of Turkish and Moroccan immigrant populations?
b) What is the effectiveness of treatments for depression in these immigrant populations?
c) What are the documented obstacles and facilitators for the therapeutic success of treatment for depression for these populations?

We expect that our findings will provide clinicians with evidence-based insights that will contribute to a better attunement of their clinical practice (assessment and treatment) to the needs of their Turkish and Moroccan immigrant patients with depression, adding to the efforts to achieve equity in mental health care for depression between immigrant and native populations.

In the current review, we refer to first- and second-generation immigrants as "immigrant populations" and to all citizens born in the country of residence, from both parents also born in the country of residence (including third and fourth generation immigrant ethnic minorities) as "natives". The reason that we do not consider the third and fourth generation ethnic minorities as immigrant populations is because this distinction was not made in any of the included studies, due to the fact that country of birth (of the person and his/her parents) was the most commonly used identifier of migration status. Also, in this review, findings concerning obstacles and facilitators were limited to those reported in studies on depression. The terms "obstacles" and "facilitators" refer to individual or contextual factors that were reported as barriers to access to treatment or obstacles for therapeutic success or enablers thereof. Such factors were either directly investigated by the reviewed studies, distilled from studied obstacles or facilitators, or discussed by the authors (as potentially explanatory or influential factors) in relation to the primary findings.

Method

Search Strategy

We conducted a systematic review to address the formulated questions. This strategy was chosen above a meta-analysis due to the expected heterogeneity in topics and study methods.

The PRISMA guidelines for reporting systematic reviews were followed (Liberati et al., 2009). We conducted a literature search in August 2013, with periodical updates (the last being in July 2017) using the databases PubMed, PsychInfo, Web of Knowledge, Science Direct and Cochrane. The keywords to identify studies included TURKISH or MOROCCAN (e.g., Turk*, Morocc*), EUROPE (e.g., Europ*, United Kingdom, UK), IMMIGRANT (e.g., immigrant, migration), DEPRESSION (e.g., depress*, depressive disorder, psychosomatic) and TREATMENT-related keywords (e.g., treatment, therapy, illness representations). Search terms concerning somatic symptoms were included due to some studies documenting a high association between depression and somatic complaints in the target populations (e.g., Erim et al., 2012). See Appendix S1 for the detailed search strategy. We limited the search to articles published between 1970 and 2017 and we did not specify a search language. Authors of possibly relevant non-English-written manuscripts (English abstract) were contacted for an English version. The article was considered for further revision if an English version was available. An exception was made for papers in German, given that at least two authors were proficient in these languages. Dutch was not an exception, as the relevant papers from Dutch scholars were published in English.

Inclusion and Exclusion Criteria

The inclusion criteria were:

a) The studies included Moroccan and Turkish immigrant samples in (one of) the 14 European countries with the largest populations of interest (United Kingdom, the Netherlands, Belgium, France, Spain, Portugal, Germany, Austria, Switzerland, Italy, Finland, Denmark, Norway and Sweden; Eurostat, 2011).

b) The study sample included exclusively Turkish or Moroccan immigrants or included Turkish or Moroccan individuals in a larger sample of other (non-western) immigrants warranted that (some of) the results of the target groups were discussed separately.

c) The study sample was formed completely or partially by participants older than 18 (for example the parents of children and samples aged 15-24).

d) The study included information on depressive disorders and symptoms, or relevant to depression treatment. We operationalized this criterion by only including papers that: 1) included at least one instrument or measure (subscale) of depression, and/or 2) made clear that all or at least the majority (> 50%) of the sample received treatment for depression or displayed depressive symptoms or features of depression according the used measures or pertinent DSM or ICD clinical diagnoses (e.g., Major Depression disorder/ Depressive disorder, Dysthymic disorder/ Persistent Depressive disorder), which were also considered measures of depression.

We excluded papers that were duplicated, reviews of literature, narrative or conceptual, based on single cases only, examined mental distress or well-being in general, included measures that did not differentiate depression from other disorders (e.g., the Kessler Psychological Distress scale, K10), or discussed depression exclusively in the context of a medical disorder (e.g., diabetes, HIV, cancer), and/or post-partum depression. The latter criterion was

established to limit the extension and content of the review, and not because it lacks value for clinical practice. Papers on bipolar disorder, psychotic symptoms, and suicidal behavior were excluded for the same reason.

Procedure of Study Selection and Data Extraction

The first author performed the search. All papers found (N = 338) were downloaded to the reference management software Endnote. All clearly irrelevant articles (e.g., duplicate papers, index summaries, papers addressing other disorders besides mood disorders) were excluded. Next, the second and third author independently read the abstracts of all remaining articles and evaluated them to determine eligibility. In case the abstract was not informative enough, the content of the full document was reviewed. Discrepancies about eligibility were resolved by discussion and consensus. If consensus was not reached, the first author was included in the discussion to reach a consensus. Furthermore, this study is part of a larger review study on depressive symptoms of Turkish and Moroccan immigrants in Europe and includes (and reports henceforth) only the papers that examine the symptomatic manifestation and the (obstacles and facilitators for) treatment for depression. Papers on the prevalence and correlates of depressive disorders and depressive symptoms in the target immigrant groups (that did not contain information on the topics of the current review) were excluded and discussed in another paper (Sempértegui, Knipscheer, et al., In preparation).

For each included study, a data extraction form was filled in by the first author and later checked and complemented, if necessary, by one of the other authors. The following aspects were recorded: characteristics of the sample (type, size, groups, mean age, gender, ethnicity, generation, indicators of SES and acculturation), study design (design, sampling, analysis method, sample size calculation, effect size), topic and research question(s), inclusion and exclusion criteria, instruments, outcome variables, main findings, strengths, limitations, and possible clinical implications. The data extraction form was piloted on three studies with different designs by the first and second authors to ensure it could capture the relevant information. See Figure 1 for the flowchart of the literature search and study selection.

Quality Assessment

The methodological quality of the studies was assessed independently by the same two reviewers that performed the data extraction per paper. For the quantitative (intervention) studies, the Quality Assessment Tool for Quantitative Studies (Thomas et al., 2004) was used as the basis for the assessment tool. Other elements, especially relevant for the current topic (e.g., cross-cultural validity and reliability for both target groups), or integrated into recognized guidelines (e.g., the Risk of Bias assessment tool; Lundh & Gotzsche, 2008; Shamliyan et al., 2010) were also included. The qualitative studies were assessed using the guidelines proposed by Greenhalgh and Taylor (1997) and the checklist for editors of the British Medical Journal (BMJ, 2013). Quality indicators to clarify the criteria were extracted from the Quality in Qualitative Evaluation Framework (Spencer et al., 2003). The assessment criteria lead to quality ratings of 'weak' (WQ), 'moderate' (MQ), and 'strong' quality (SQ). Appendix S2 displays the list of quality criteria.
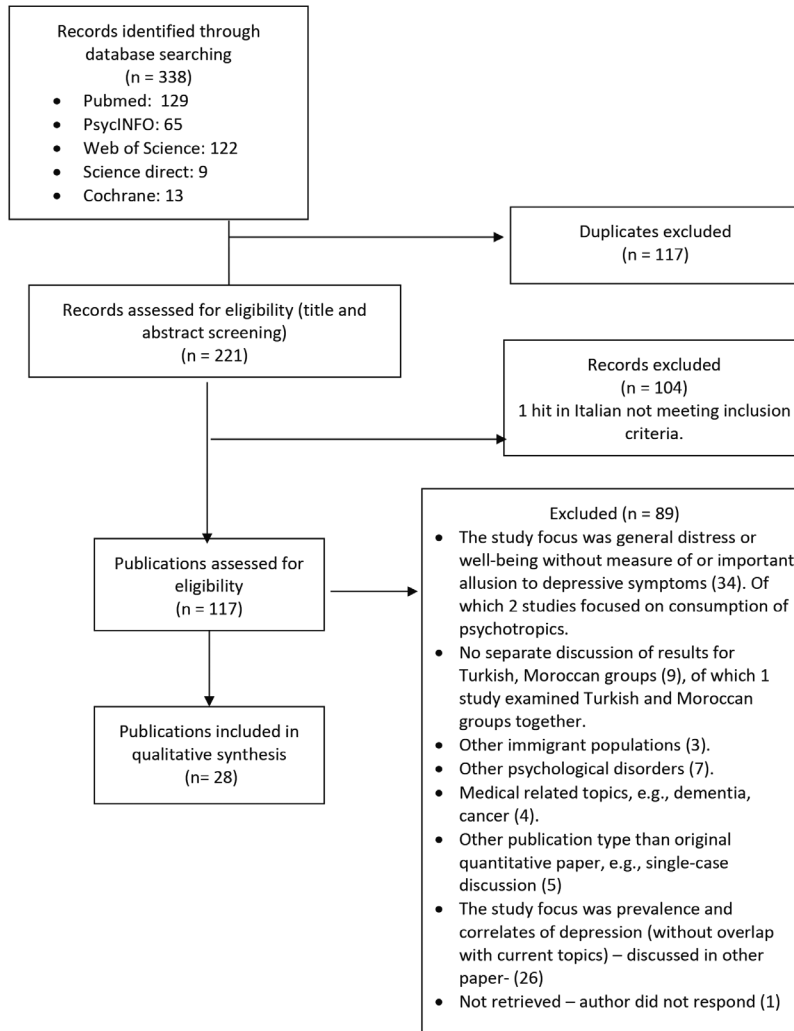
Figure 1. Flowchart of literature search and study selection

Results

After the selection process, we included 28 peer-reviewed published articles on depressive disorders and symptoms among Turkish and Moroccan populations in Europe. The articles that met inclusion criteria were published between 2000 and 2017. The design of the studies was mainly cross-sectional and quantitative. Four studies had a longitudinal design, three were RCTs and four examined the data qualitatively. All of the 28 studies included 11,533 Turkish

individuals; median sample size (range) = 97.5 (10 - 4,884), of which 62.3% were women. Seven studies included 5,278 Moroccan individuals; median sample size (range) = 99 (22 - 3,458), of which 62.1% were women. Fourteen studies also included 303,212 native individuals; median sample size (range) = 491.5 (41 - 131,690), of which 66.4% were women.

Of the studies on Turkish individuals, the majority examined clinical samples (64.3% vs. 21.4% community samples), whereas the majority of the studies on Moroccan individuals examined community samples (57.1% vs. 28.6% clinical samples). A minority (3.6%) of the studies with Turkish individuals received a SQ rating, 46.4%, MQ, and 50%, WQ. All studies with Moroccan samples received a MQ rating. The main outcomes included information on symptomatic manifestations of depression, treatment effectiveness and obstacles and facilitators for therapeutic success (including accessibility, treatment continuity and outcomes). See Table 1 for the summary of the included studies and Appendix A for the detailed quality ratings.

The Symptomatic Manifestation of Depression or Related Idioms of Distress

Table 2 displays the results on the symptomatic manifestation of depression or related idioms of distress. Twelve studies were analyzed on this topic, discussing findings from Dutch (n=3), Swedish (n=1), German (n=7), and Austrian (n=1) populations. Of these studies, three MQ studies contributed to the understanding of symptomatic manifestation through the study of psychometric aspects of instruments to measure depressive disorders and symptoms (CIDI and CES-D; Schrier et al., 2010; Smits et al., 2005; Spijker et al., 2004). All papers examined Turkish samples, whereas three studies also included Moroccan samples. Little information was available on second-generation individuals, men, and highly educated immigrants.

Four studies assessed the symptoms of exclusively Turkish patients with quantitative and qualitative methods. The quantitative studies (one MQ, one WQ) found that symptoms such as 'irritability', 'fatigue' and 'work difficulty' were more often endorsed, especially by women and first-generation patients (Morawa & Erim, 2014a). 'Sadness' was also highly endorsed by patients with psychosomatic complaints, whereas 'sleeping problems' were common among primary care patients (Morawa & Erim, 2014a). Correlational analyses showed that psychological distress, depressive and somatic symptoms correlated positively with each other and were thus all relevant for patients with moderate to severe depression (Heredia Montesinos et al., 2012).

The two MQ qualitative studies assessed depressive symptoms or related idioms of distress beyond Western symptoms, meaning those features not included in the DSM or the ICD classification systems, which are based on research and consensus regarding the symptomatic manifestation of depression in mainly Western contexts (e.g., North America, Europe; see Haroz et al., 2016 for a review on this topic). The studies examined samples of Turkish- Dutch and -Swedish, low-educated, female patients with mostly major depression (Dutch sample) or a combination of dysthymic and anxiety disorders (Swedish sample). In addition to a broad range of somatic, anxiety and depressive complaints (Baarnhielm & Ekblad, 2000; Borra, 2011), Turkish women interviewed in their own language expressed several relevant Turkish idioms of distress that referred to bodily or psychological sensations, often lacked identical equivalents in the

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Table 1. Characteristics of the included studies (n=28) and assessed study quality

Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Symptom manifestation						
Akbiyik et al., 2008 Germany, Turkey	Between- groups, cross-sectional study, clinical sample, outpatients	105, 44.9% - 53 TG, 64%, 49,4 ± 8,4 - 52 nT, 73%, 44.7 ±9.2	Total work years: 20.0 ± 10.0; (TG); 12.3 ± 12.5 (nT) Income: moderate 26% (TG), 82% (nT); low 54% (TG), 13% (nT) Marital status: married 81% (TG), 78% (nT) Generation: first 100% (TG)	MINI SCL-90-R BDI	MANSA	2 / -
Akbiyik et al., 2009 Germany, Turkey	Between- group, cross-sectional study, clinical sample, outpatients	105, 44.9% - 53 TG, 64%, 49,4 ±8,4 - 52 nT, 73%, 44.7 ±9.2	Total work years: 20.0 ±10.0 (TG); 12.3 ±12.5 (nT) Income: moderate 26% (TG), 82% (nT); low 54% (TG), 13% (nT) Marital status: married 81% (TG), 78% (nT) Generation: first 100% (TG)	MINI SCL-90-R BDI	MANSA	3 / -
Bäärnhielm and Ekblad, 2000* Sweden	Grounded- theory qualitative study, clinical sample, outpatients	10 TS, 100%, 35 (31-48) Ethnic affiliation: Turkish 80%, Kurdish 10%, Assyrian 10%.	Education: 6.5 yr (0–12) SES: low 100% Occupation: employed 30% Marital status: married 70% Generation: first 100% Nationality: Swedish 50% Duration of stay: 19yr (4-29) Language skills: good –fluent 80%	SCID-I	Expressions of distress	2 / -
Beutel et al., 2016 Germany	Cross-sectional, general population	14,943, -, (35-74), - 11418 native German (nD), 49.3%, 55.5 ± 11.1 - 141 Turkish-German (TG), 50.9%, 52.6 ± 10.6 - 295 Polish-German (PG), 49.4%, 54.7 ± 11.1 - 282 Western countries immigrants - 386 Middle and Southern European immigrants.	SES (3 lowest-27): 12.0% (TG), 14.0% (PG), 12.0% (nG). Employment: 64.5% (TG); 63.3% (PG), 59.6% (nG) In retirement: 21.1% (TG); 30.2% (PG), 32.7% (nG) Net income: 750-1499€ 15.3% (TG), 8.2% (PG), 9.7% (nG), 1500-2999 44.7% (TG), 33.8% (PG), 38.3% (nG), Marital status: married or relationship: 84.2% TG); 79.6% (PG), 81.0% (nG) Generation: first 100% Duration of residence: 31.4 ± 8.4 (TG), 28.2 (± 12.9; PG)	PHQ-8	GAD-7 PHQ-panic module Mini-Spin DS-14	3 / -

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Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Borra, 2011 The Netherlands	Qualitative study, clinical sample, outpatients	20 TD, 100%, (20–50) Region: Anatolian 100%	Education: low educated 75% Occupation: working 15% Marital status: married 90% Generation: first 100% Receiving-country language proficiency: non-proficient 90% Duration of stay: > 10 years 90%	DSM-IV diagnosis	Idioms of distress	2 / -
Deisenhammer et al., 2012 Austria	Cross-sectional study, clinical sample, out- and inpatients	136, 100% - 40 TA, 44.3 (20–67, ±9.8 - 41 nA, 47.5 (20–73, ±12.4) - 55 nT, 40.8 (18–76, ±13.1)	Educational level: <8 years in school 82% (TA), 12% (nA), 22% (nT) Marital status: married, 32% (TA), 75% (nA), 64% (nT) Occupation: employed 30% (TA), 20% (nA), 18% (nT) Housewives 10% (TA), 12% (nA), 51% (nT)	ICD-10 diagnosis (F31.3, F31.4, F32 or F33) MADRS BDI	BSI List of physical symptoms.	3 / -
Heredia Montesinos et al., 2012 Germany	Cross-sectional study, clinical sample, outpatients	63 TG, 100%, 48.42 (28–72, ±9.1)	Education: primary school or less 46.1%, university 14.3% Income: no own income 14.3%, own income 25.4%, social benefits 36.5% Marital status: married 28.6% Generation: first 100% Time of migration: as adults 89%, as children 11%	ICD-10 diagnoses (F32, F33, and F34) BDI-II	Stigma Scale SOMS- II SCL- 90- R (G SI, PSDI, PST)	3/-
Mewes et al., 2010* Germany	Cross-sectional, general population sample	134, - - 42 TG, 31%, 30.9±10.5 - 43 East European-German (EeG), 67%, 51.7±21.5 - 49 Soviet Union-German (SUG), 53%, 44.3±19.6	Employment: employed 64% (TG), 49% (EeG), 37% (SUG) Marital status: in relationship 60% (TG), 69% (EeG), 42% (SUG)	PHQ-9	PHQ-15, PHQ-general anxiety	3 / -

Table 1. Continued

Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Morawa & Erim, 2014a Germany	Cross-sectional, clinical sample, out- and inpatients with psychosomatic complaints	471 TG, 46.3%, 39.7 ± 11.5	Education: none 3.2, vocational school 39.1%, high 9.1% Employment status: employed 43.5%, jobless 11.0% Income: <500€ 14.9%, 1000-2000€ 29.5% Marital status: married 70.7%, Duration of residence: 24.3 (11.1) Generation: first 77.1% Age of immigration: 18.9 (8.0) Migration motivation: marriage 39.1%, family reunion 22.5% Language proficiency: moderate 38.0%	BDI	FRACC	2 / -
Sariaslan et al., 2014 Germany	Cross-sectional, general practice sample	418, 47.1% - 254 TG, 42.9%, 38.37 ± 12.28 - 164 nG, 53.7%, 54.30 ± 18.34	Education: 10 grades high school 26.0% (TG), 65.2% (nG); high school 41.7% (TG); 9.8% (nG) Employment: non-active 15.7% (TG); 4.3% (nG) Income: 1000-2000 26.0% (TG), 35.4% (nG) Marital status: married 74.8% (TG), 53.7% (nG) Duration of residence: 25.84 ± 10.93 (TG) Generation: first 65.7% (TG)	BDI	SOMS	1 / -
Schrier et al., 2010 The Netherlands	Cross-sectional study, community sample, Amsterdam, random stratified sample	812, - - 213 TD, 60.1%, 47.3 ± 14.2 - 191 MD, 47.1%, 49.6 ± 14.4 - 321 nD, 58.3%, 54.1 ± 14.6 - 87 Surinamese-Dutch (SD), 71.3%, 52.3 ± 15.2	Education: none or primary only 60% (TD), 20% (MD), 17% (nD) Family income: low 80% (TD), 31% (MD), 51% (nD, SD) Generation: first >90% Preference native language: >68.9%	CIDI 2.1 (section E) SCL-90-R (depression)	WHODAS II	2 / 2
Smits et al., 2005 The Netherlands	Validation study, qualitative methods, community sample, Amsterdam	44, 50%, (55-74) - 22 TD, 50% - 22 MD, 50%		CIDI 2.1 CES-D	Semi-structured interview on the experience of migration, aging and symptoms.	2 / 2

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Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Spijker et al., 2004 The Netherlands	Cross-sectional validation study, non-institutionalized community sample, Amsterdam	933, -, (55-74) - 330 TD, Mage women 63.7 - 299 MD, Mage women 65.2 - 304 nD, Mage women 65.7	Education: none or primary 92.7-98.8% (TD), 97.6-100% (MD), 21.5-33.8% (nD) Income: On/below poverty level: 41.6-43.9% (TD), 50.4-72.6 (MD), 11.9-19.5 (nD)	CES-D	SF-36 (general mental health subscale)	2 / 2
Treatment effectiveness, obstacles, and facilitators						
Callies et al., 2007 Germany	Cross-sectional study, community sample, Berlin	303, 19.29 (17-25, ±1.8) - 139 TG, 58.3%, 19.44 (±1.7) - 63 Turkish-oriented, - 76 German-oriented - 164 nG, 58.5%, 19.7 (±1.9)	Marital status: married 15.1% (TG), 0% (nG), single 82.7% (TG), 98.2% (nG)	SCID-I SCL–14 (depression subscale)	SCL–14 (somatization, phobic anxiety subscales) Acculturation Questionnaire for Turkish immigrants FAKKS-T FEP	3 / -
Fassaert et al., 2009 The Netherlands	Cross-sectional study, community sample	626, - - 170 TD, 55.9%, 46.3 (20-82, ±14.1) - 146 MD, 54.2%, 48.2 (19–91, ±14.6) - 310 nD, 55.9%, 54.2 (20–92, ±14.6)	Education: >elementary school 48.2% (TD), 45.9% (MD), 79.7% (nD) Insurance: public 80.6% (TD), 91.8% (MD), 62.9% (nD)	CIDI 2.1 (sections D, E) SCL-90-R (depression)	PCNQ SCL-90-R (agoraphobia, anxiety, somatization)	2 / 2
Fassaert, Nielen et al., 2010 The Netherlands	Cross-sectional, general practice sample	147,109, not stated, 51.8 ± 18.5 - 4884 TD; 72.5%, 38.7 ± 11.3 - 3458 MD; 67.1%, 35.7 ± 9.3 - 131,690 nD, 69.1%, 53.2 ± 18.6	Disposable income (in units of 1000€): 16.3 ± 6.0 (TD), 14.8 ± 5.1 (MD), 20.5 ± 12.6, (nD) Marital status: Married, living together 64.5% (TD), 58.9% (MD) 41.6% (nD)	ICPC diagnosis (P03, P76)		2 / 2

Table 1. Continued

Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Fassaert, Peen et al., 2010	Cross-sectional, clinical sample, in-outpatients	17,270 episodes of treatment; (18-65) -947 TD, 68.7% 35.4 ± 8.3 -834 MD, 58.4% 35.3 ± 8.7 -12,824 nD, 65.4% 40.6 ± 11.7, -Dutch Antillean -Surinamese -Other non-western -Other western	Urbanization: very high 59.9% (TD), 71.6% (MD), 26.0% (nD) Marital status: married 72.1% (TD), 66.3% (MD), 45.4% (nD)	DSM-IV-diagnosis (codes 296.21–296.24 and 296.31–296.34)		2 / 2
Mösko et al., 2008 Germany	Longitudinal, prospective study, clinical sample, inpatients	852, - -99 TG, 45%, 39 ±10 -753 nG, 50%, 42 ±10	Education: secondary 54% (nG), 60% (TG) Occupation: unemployed 37% (TG), 26% (nG) Marital status: single 27% (TG), 34% (nG)	ICD-diagnosis	SCL-14 SF-8 HSF HoNOS-D GAF	3 / -
Mösko et al., 2011 Germany	Longitudinal, prospective study, clinical sample, inpatients	25066, - -88 TG of 1118 with immigrant background (MB), 74.4%, 46.4 ± 10.2 -23,763 nG, 71.6%, 47 ± 9.62	Education: secondary 22% (nG), 23% (MB) Occupation: unemployed 10% (nG), 15% (MB) Marital status: In relationship 17% (nG), 18% (MB)	SCL-14 (depression)	SCL-14 (somatization, phobic anxiety) SF-8 HSF	3 / -
Nap et al., 2015 The Netherlands	Longitudinal, naturalistic, cross-sectional, clinical sample, outpatients	737, - -197 TD, 60.40%, median = 37 -328 MD, 48.8%, median =35 -212 SD, 70.6%, median = 40	Generation: first 77% (all groups)	BSI (depression)	BSI (somatization, anxiety, depression) LAS EQ-5D Patient Request Form (PBV) Dutch shortened version	2 / 2
C. Nickel et al., 2006 Germany	Longitudinal, prospective (pre-post) study, clinical sample, inpatients	195 TG, 77.4%, 44.7 ± 9.2; women 47.8 ±7.5, men 51.7 ±8.2	Education: none women 32.5%, men 27.3%, Elementary/secondary school women 67.5%, men 70.5% Marital status: married or living together women 86.8%, men 79.5% Duration of stay: women 22.1 (±6.2), men 25.7 (±8.1)	DIPS SCL-90-R (depression)	SCID-II GSI	3 / -

Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
M. Nickel et al., 2006 Germany	RCT, clinical sample, in patients with chronic somatoform and depressive disorders	128 TG, - 64 Bioenergetic group (BEG), 68.8%, 48.3±7.1 - 64 control group 330 (CG), 71.9%, 49.4±7.5	Occupation: laborer 76.6% (BEG), 71.9% (CG) Marital status: living in partnership 82.8% (BEG), 85.9% (CG) Years in Central Europe: 24.5±8.1 (BEG); 23.0±7.5 (CG) Generation: first 100% (BEG), 100% (CG)	SCL-90-R (depression)	SCL-90-R (all subscales, GSI) STAXI	3 / -
Reich et al., 2015 Germany	Cross-sectional, clinical sample, inpatients	100, (18-61), - 50 TG, 66%, 46.9±9.1 - 50 nG, 62%, 45.9±8.9	Education: 7.4 (±3.1; TG), 11.1 (±1.7; nG) Employment: 34% (TG); 70% (nG) Duration of stay: ≈31yr. Generation: first 84% Receiving-country language proficiency: poor 40%, good 26% Residence status: permanent residence permit 68%	PHQ-9	PHQ-15 Brief IPQ IPQ-R KKG FMP	2 / -
Renner & Berry, 2011 Austria	RCT, clinical sample, community sample with recurrent depression	67; 104, 100% women, Turkish-Austrian, 42.7 (28-61, ± 8.7) - 21 Self-help group (T1), 15 (T2), 14 (T3) - 23 CGT group (T1), 11 (T2), 10 (T3) - 23 wait-list control (T1), 12 (T2), 7 (T3)	Education: 5.9 ± 3.1 Duration of stay: 18.6 ± 8.2 Generation: first 93.9%	CES-D ICD-10 diagnoses (F33)	BSI PHQ CAPS (Life event checklist) HTQ	3 / -
Schouler-Ocak et al., 2010 Germany	Cross-sectional, clinical sample, outpatients	2024; 981 (complete accounts), 55.6%, 47.7 ± 17.2 - 8.3% TG (+- 82) - 67.5% nG (+- 662) - 14.0% Eastern European- German (EEG) (+- 137)	(complete sample) Education: >high school, 55.2% Occupation: working 20.9% Marital status: single/separated 46.7% Treatment duration in the past: 7.5, ±8.6	ICD-10 diagnosis (F0-E9 codes)	Communication problems interview	3 / -
Siller et al., 2017 Germany	Qualitative study, community/ convenience sample	43 TD, 65.2%, 42.7 ± 8.7 (28-61)	Education: years of school attendance 6± 3.5 Marital status: married 87.3% Generation: first 94% Duration of stay: 18.6 ± 8.2	ICD-10 diagnosis (F.33 codes)		2 / -

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Table 1. Continued

Author, year, Country	Design; population type	Study sample (n, ethnicity, % female, age (range))	Further sample characteristics (%)	Instrument to measure depression	Other instruments	Study quality rating T/M
Ünlü Ince et al., 2013 The Netherlands	RCT, clinical sample, outpatients	96 TD, 62%, 35.2 ± 9.3 - 49 self-guided, problem-solving group (T1), 26 (T2), 13 (T3) - 47 wait-list control group (T1), 30 (T2), 24 (T3)	Education: low 27%, middle 41% Marital status: long-term relationship 64% Generation: first 95% Language: Turkish 89% Employment: yes 52%	CES-D BDI-II MINI (section C)	HADS SCL-90 (somatization scale) LAS EQ-3D	3 / -
Zollman et al., 2016 Germany	Between-group, pre-post prospective study In- and outpatient sample	128165, (55-74), 50% women - 2613 TG, 50.6%, 45.6 - 120748 nG, 64.7%, 48.2 - 4804 other immigrants (OM), 64,7%, 48.5	Education: 10 degrees high school 77.2% (TG), 72.8% (nG), 70.5% (OM) Occupational diploma: yes 38.0% (TG); 87.6% (nG); 64.1% (OM) Marital status: married, in relationship 68.7% (TG), 53.8% (nG), 55.6% (OM)	ICD-10 diagnoses (codes F1-F9)	Sociodemographic information	3 / -

Note. *Study also included in the treatment section. Abbreviations: T = Turkish sample; M = Moroccan sample SES = socioeconomic status; RCT = Randomized Controlled trial; nT = native Turkish, nD = native Dutch, TD = Turkish-Dutch; MD = Moroccan-Dutch, nB = native Belgian; TB = Turkish-Belgian; MB = Moroccan-Belgian; nG = native German; TG = Turkish-German; PG = Polish-German; nA = native Austrian, TA = Turkish-Austrian; TS = Turkish-Swedish.

Instruments: BDI = Beck Depression Inventory; Brief IPQ = Brief Illness Perception Questionnaire; BSI = Bradford Somatic Inventory; CAPS = Clinician Administered PTSD Scale; CES-D = Center for Epidemiologic Studies Depression Scale; CIDI 2.1 = Composite International Diagnostic Interview 2.1; DIPS = Diagnostisches Interview bei psychischen Storungen DS-14 = Type D Scale-14; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders-IV; EQ-5/3D = EuroQol five/three dimensions questionnaire; FAKKS-T = Der Fragebogen zur Akkulturation für türkische immigranten; FEP = Fragebogen zu Einstellungen gegenüber der Inanspruchnahme psychotherapeutischer Hilfe; FMP = Psychotherapeutic Treatment Expectations and Openness to Psychotherapy Scales; FRACC = Frankfurt Acculturation Scale; GAF = Global Assessment Scale of Functioning; GSI = Global Severity Index; HADS = Hospital Anxiety and Depression Scale; HoNOS-D = Health of the Nation Outcome Scale; HSF = Hamburg Self-care Questionnaire; HTQ = Harvard Trauma Questionnaire; ICD-10 = International Statistical Classification of Diseases and Related Health Problems -10; ICPC = International Classification of Primary Care; IPQ-R = Illness Perception Questionnaire- Revised; KKG = Locus of Control Inventory for Illness and Health; LAS = Lowlands Acculturation Scale; MADRS = Montgomery-Asberg; MANSA = Manchester Short Assessment of Quality of Life; MINI = Mini International Neuro-psychiatric Interview; Mini-Spin = Mini-Social Phobia Inventory; PHQ-8/9/15 = Patient Health Questionnaire-8/9/15; PNCQ = Perceived Need for Care Questionnaire; PSDI = Positive Symptom Distress Index; PST = Positive Symptom Total; SCID-I = Structured Clinical Interview for DSM-IV (SCID-I); SCL-14/ 90-R = Symptom Checklist-14/90-Revised; SF-36, 8 = Short Form 36, 8 Health Survey Questionnaire; SOMS / II = Screening fur Somatoforme Storungen / II; STAXI = State-Trait Anger Expression Inventory; WHODAS II = World Health Organization Disability Assessment Schedule II.

'foreign' language, and were preferred above some unfamiliar Western concepts such as worthlessness and self-punishment (Borra, 2011). However, the use of idioms of distress was avoided by Swedish Turkish, because they feared being misunderstood by their therapists (Baarnhielm & Ekblad, 2000).

Results of (average MQ) studies that compared Turkish immigrant populations to other immigrant groups or native individuals, showed that Turkish populations in Germany, Austria and the Netherlands reported symptoms across all measured domains of depression (i.e., mood (depression, apathetic), vegetative, somatic, psychomotor, cognitive, positive affect, interpersonal affect depending on the instrument used; Deisenhammer et al., 2012; Schrier et al., 2010; Spijker et al., 2004). However, Turkish groups, compared to natives, often reported higher levels of (core) depression severity (Deisenhammer et al., 2012; Schrier et al., 2010). Also, there was some evidence that Turkish immigrant samples more often endorsed symptoms such as suicidal thoughts, irritability, and dissatisfaction compared to natives (Beutel et al., 2016; Sariaslan et al., 2014), whereas natives tended more often to report symptoms such as low self-esteem and self-deprecation (Sariaslan et al., 2014; Schrier et al., 2010). Both Turkish and native populations also reported somatic complaints, such as back pain and fatigue. However, also here, Turkish populations often reported higher levels of somatic symptom severity, or a combination of somatic and mood symptoms (Sariaslan et al., 2014; Spijker et al., 2004). Turkish groups reported similar psychopathology levels than Eastern European immigrants did (Mewes et al., 2010), but higher suicidality (Beutel et al., 2016), though studies were scarce.

Two studies provided some evidence that the symptom manifestation varied depending on the clinical features of the sample (i.e., symptom severity related to the clinical setting). A Turkish-Austrian in- and outpatient sample reported more similarity to natives on core depressive symptoms (WQ; Deisenhammer et al., 2012) than Turkish-German in the general practice did (SQ; Sariaslan et al., 2014). However, the divergent countries, instruments, and quality of the studies hampered formulating robust conclusions about symptom profile differences. Moreover, three (average WQ) studies showed that different symptom manifestation could also be related to different living contexts (receiving country and country of origin) or migration, since they found that immigrant patients reported more mood depressive symptoms, and fewer symptoms such as hostility and interpersonal sensitivity compared to Turkish patients living in Turkey (Akbiyik et al., 2008; 2009; Deisenhammer et al., 2012).

The symptom manifestation of mostly middle-aged, older adults, first-generation Moroccan people and patients was examined in three MQ Dutch studies (Schrier et al., 2010; Smits et al., 2005; Spijker et al., 2004). Moroccan- Dutch reported symptoms on all domains measured by the SCL-90 and CES-D (mood, cognitive, psychomotor, vegetative, positive affect and interpersonal affect; Spijker et al., 2004) but, compared to natives, mood and somatic complaints were combined in one domain (Schrier et al., 2010; Spijker et al., 2004). However, Moroccan-Dutch older adults found it embarrassing to discuss mental health complaints, and reported spontaneously very few, mostly somatic complaints, such as fatigue, sleep, eating and concentration problems (Smits et al., 2005). Moreover, the CIDI showed a method and item bias since questions related to episodes

Table 2. The Symptomatic Manifestation of Depression or Depression-related Idioms of Distress

Study reference	Sample, study country	Turkish immigrants	Study populations	
			Other immigrant groups	Native Europeans
Baarnhielm, 2000	Female, first-generation, adult outpatients, Sweden	Somatic symptoms: (Lateralized) pain, dizziness, fatigue, hypertension, forgetfulness, breathing difficulties and hearth symptoms. Sadness, disappointment, grief or fear.		
Beutel et al., 2016	General adult population, Germany	Higher suicidal ideation	Lower suicidal ideation[a]	Lower suicidal ideation
Borra, 2011	Female, first-generation, adult outpatients, the Netherlands	Somatic symptoms: headache, premenstrual symptoms, feeling of tightness. Anxiety and depressive symptoms. Visual and auditory hallucinations. Suicide attempts. Experiences of loss and violence. Idioms of distress: sıkıntı and bunalım (feeling tightness, oppressed, or being squeezed); karamsar (black feeling); kuruntu (thought that keeps churning in the head); bozukluk (being devastated); korku (feeling of impending danger; korku (agitation and irritation); sinirli (anger attacks). Problems with cesaret (courage); gurur (pride); and kandine güven (self-confidence) were better understood compared to self-deprecation.		
Heredia Montesinos, 2012	Female, first-generation, adult outpatients, Germany	Depressive and somatic symptoms factor, and a mixed factor of miscellaneous psychological distress symptoms. Fear of stigmatization was related to the depressive and psychological distress symptoms, not to the somatic symptoms.		
Mewes et al., 2010	Adult general population, Germany	Similarities (Turkish and other immigrant groups): Similar levels of depressive, anxiety and somatic symptoms[b].		
Morawa, 2014	Adult in-and outpatients with psychosomatic complaints, Germany	Irritability, fatigue and work difficulty, especially for women and first-generation patients. Sadness (psychosomatic sample) and sleep problems (primary care).		

Study reference	Sample, study country	Turkish immigrants	Native Turkish (living in Turkey)	Native Europeans
			Study populations	
Akbıyık, 2008	Adult, first-generation, psychiatric outpatients, Germany, Turkey	Higher depression severity. Lower quality of life (less satisfaction with physical health and work)	Lower depression severity. Higher quality of life (more satisfaction with physical health and work).	
		Similarities (Turkish immigrants and native Turkish): Similar satisfaction with financial situation and leisure		
Akbıyık, 2009	Adult, first-generation, psychiatric outpatients, Germany, Turkey	High depression severity. More report of depressive symptoms. Lower report of hostility, anxiety or interpersonal symptoms.	High general psychopathology. More report of hostility, interpersonal sensitivity, obsessive-compulsive symptoms, anxiety and phobic anxiety.	
		Similarities (Turkish and native Turkish): High levels of somatization		
Deisenhammer, 2012	Female adult in-and outpatients, Austria	Higher scores on self-reported and assessor-rated depression. Higher scores in symptoms as lassitude (lethargy) and lowest in reduced appetite.	Higher scores on self-reported and assessor-rated depression.	Lower scores on self-reported and assessor-rated depression.
		Similarities (Turkish immigrants and native Turkish): high depression severity and high level of somatic symptom severity.		
		Similarities (Turkish immigrants, native Turkish, and native Europeans): report of core depressive symptoms, such as inability to feel, pessimistic thoughts, and sadness.		

Table 2. Continued

			Study populations	
Study reference	Sample, study country	Turkish immigrants	Native Turkish (living in Turkey)	Native Europeans
Sariaslan, 2014	Adult general population attending the general practice, Germany	More report of suicidal thoughts, irritability, and dissatisfaction. More report of pain of arms or legs, face or head, gastric problems or stomachache, memory loss, hallucinations, hiccup or burning in breast or stomach.		More report of depressed mood, demotivation, self-criticism, feelings of guilt, self-deprecation, social avoidance, isolation, hypochondria, crying. More report of coordination or balance problems, severe diarrhea, urinating problems or urine loss, paralysis or muscle weakness.
		Similarities (Turkish immigrants, native Turkish and native Europeans): report of sleeping problems, weight and appetite changes, negative body-image, working problems, pessimism, diminished libido, back pain, fatigue.		
Study reference	Sample, study country	Turkish immigrants	Moroccan immigrants	Native Dutch
Schrier et al, 2010	Adult community individuals, the Netherlands	More frequently reported increase of appetite or weight, and less frequently loss of interest, low self-esteem, feeling guilty and concentration problems (vs. natives).	More frequently reported poor appetite or weight loss, feeling no interest, and thoughts of death problems (vs. the natives).	Lower general depression scores
		Similarities (Turkish, Moroccan, and Native Dutch): All reported symptoms in the domains: mood, psychomotor, cognitive and vegetative disturbances. Similar level of disability.		
Smits et al., 2005	Elderly community individuals, the Netherlands	Women: irritation, forgetfulness, impatience, demoralization, restlessness, worrying (interview), sleep problems, lost interest in sex (CIDI). Taboo around sexuality and suicide. Men: Irritability and loneliness, worrying, sadness, forgetfulness and restlessness (interview), whereas lack of energy, sleep and eating problems (CIDI)	Women: few reported symptoms e.g., sleep, eating and concentration problems (interview, CIDI). Taboo around mental complaints in general. Men: forgetfulness, tiredness, and restlessness. Taboo concerning labeling symptoms as depression.	
		Similarities (Turkish and Moroccan immigrants): Embarrassment and reluctance to discuss mental health.		

		Study populations		
Study reference	Sample, study country	Turkish immigrants	Moroccan immigrants	Native Dutch
Spijker et al., 2004	Low SES, elderly community individuals, the Netherlands	CES-D factor structure (4 factors): combined depressed affect with somatic factor 1, combined depressed affect with somatic factor 2.	CES-D factor structure (3 factors): combined depressed affect with somatic symptoms.	CES-D factor structure (5 factors): pure depressed affect, somatic factor 1, somatic factor 2.

Similarities (Turkish, Moroccan, and Native Dutch):
Positive affect, and interpersonal affect factors were present and clearly distinguishable. All groups differed from the original 4-factor structure: depressive affect, positive affect, somatic affect, somatic symptoms and interpersonal relationships (Radloff, 1977).

Note. [a] Polish-German migrants. [b] Eastern-Europe-German and ex-Soviet Union-German migrants.

Table 3. Overview of RCT'S for depression among Turkish immigrant populations in Europe

Study reference	Intervention and control condition	Treatment effects on depression compared to control group/ comparator intervention	Conclusions
M. Nickel et al., 2016	Psychosomatic rehabilitation[a] with bioenergetic therapy[b] vs. psychosomatic rehabilitation with gymnastic exercises	Difference in score change between groups after six weeks (95% CI; intention to treat): -1.8 (-4.5 – 0.1), p=0.03.	Bioenergetic therapy led to a greater improvement in depressive symptoms compared to standard treatment.
Renner and Berry, 2011 Recurrent depression	Group CBT vs. culturally adapted self-help group[c] vs. wait-list	Hedges g (SE)*: - CBT vs. control group for CESD: -0.6 (0.41) - CBT vs. wait-list group for PHQ: -0.64 (0.41). - SHG vs. wait-list for CESD: -0.1 (0.4) - SHG vs. control group for PHQ: 0.00	Interventions were not superior to the wait-list condition.
Unlu Ince et al., 2013	Internet-based, self-guide, culturally adapted intervention[d] vs. wait-list	Cohen's d (95% CI): At posttest, intention to treat: 0.37 (-0.03 – 0.78), p=0.07. At posttest per protocol (n=30): 1.68 (0.69 – 2.67), p<0.001; At follow-up per protocol: 1.13 (0.19 – 2.07), p=0.02. At posttest, completers only (n=56): 0.72 (0.17 – 1.26), p=0.01; At follow-up completers only 0.94 (0.23 – 1.65), p=0.01.	No significant clinical change (based on Jacobson and Truax, 1991) was observed in the reduction of depressive symptoms.

Abbreviations: CI, Confidence intervals; SE, Standard deviation; CBT: Cognitive-behavioral therapy; CESD, Center for Epidemiologic Studies Depression Scale; SHG, Self-help group; PHQ, Patient health questionnaire. * Calculated based on data provided in the corresponding publication. [a] Psychosomatic rehabilitation is an eclectic program including individual and group gestalt, behavioral and social therapy offered in the patient's mother tongue or preferred language. [b] Bioenergetic therapy consisted of expression exercises, exercises setting boundaries, vocal exercises, respiratory and bodily movement exercises, internal and external perception, expression of aggression, and grounding. [c] Culturally sensitive, community-based self-help groups aimed at promoting autonomy, empowerment and problem-solving capacities. [d] Intervention was an internet-based version of a self-guided, problem-solving intervention with cultural elements, with weekly coach support through email.

in the past and abstract elements were not easily understood. Poor education and low verbalization ability in this population were complicating factors (Smits et al., 2005).

Treatment Effectiveness

Seven studies examined the use and effectiveness of psychotherapies in Turkish samples. The studies were conducted in the Netherlands (n=1), Germany (n=4), and Austria (n=2). We did not retrieve studies examining the effectiveness of psychotherapies in Moroccan samples, or the effectiveness of pharmacotherapy (antidepressants) for the treatment of depression of Turkish and Moroccan immigrants. Table 3 shows an overview of the three available RCTs.

Cognitive behavioral therapy vs. culturally adapted self-help groups

Renner and Berry (2011) conducted a RCT (WQ) comparing group cognitive behavioral therapy (CBT) provided by a German-speaking clinician with a Turkish interpreter, to culturally adapted self-help groups moderated by Turkish native speakers, and to wait-list. Findings of the intention-to-treat analyses showed that neither CBT- nor self-help groups were effective in diminishing depressive symptoms of Turkish migrant women. CBT participants showed decreased depression scores at posttest, but they deteriorated at follow-up (Renner & Berry, 2011). Most completers of both the CBT and the self-help interventions (61.8%) showed no significant symptomatic change, 35.3% improved and 2.9% deteriorated (Renner & Berry, 2011). Nevertheless, qualitative analyses of the therapeutic process of the self-help groups indicated that participating women felt supported by the group members, gained insight in problematic interaction patterns, and behaved more independently and assertively at the end of the treatment (Siller, Renner, & Juen, 2017). However, there is no evidence that this process only took place in the self-help groups, since the CBT qualitative process was not reported. In this study, they found that younger age, more years living in the receiving country and a higher number of traumatic experiences (without reference to PTSD symptoms) predicted a greater symptom reduction; however, the regression analyses might have been underpowered.

Problem solving therapy

Intention-to-treat analyses of a RCT (WQ) showed that an online, culturally adapted, problem-solving intervention for Turkish- Dutch with depressive symptoms was not superior to wait-list in reducing depressive symptoms at posttest or follow-up (see Table 3 for the detailed results; Ünlü Ince et al., 2013). Even though online recruitment seemed successful for reaching participants of Turkish descent, only 20% of the participants assigned to the experimental condition completed the full program, and most of the participants did not start the program or only followed 1-2 sessions (Ünlü Ince et al., 2013), which highlights the importance of engaging patients in treatment, also in e-health modules. The type of symptoms experienced (physical and/or psychological) did not differ between the groups and thus does not explain the findings. Despite the strong study design and middle to high response rates, high attrition at posttest and follow-up leading to low statistical power hampered conclusions and generalizability of the findings.

Eclectic treatments

Psychosomatic rehabilitation programs are common practice in Germany for working with Turkish in- and outpatients with psychosomatic symptoms and high depression prevalence (48%-96%; C. Nickel et al., 2006). These are eclectic programs including individual and group sessions of non-verbal, gestalt, behavioral, and social therapy often offered in the patient's mother or preferred language (C. Nickel et al., 2006). The third RCT study (WQ) examined the added value of bioenergetic therapy, a treatment method comprising interventions on the physical level based on psychoanalytical premises, to psychosomatic rehabilitation. This study

3

Table 4. Potential Obstacles and Facilitators of Psychological Treatment and Treatment Outcomes Among Immigrant Populations in the Included Studies

Study	Immigrant sample, study country	Potential obstacles	Potential facilitators
Access to mental health care for depressive symptoms – Turkish immigrants			
Baarnhielm and Ekblad, 2000	Low SES, female, first-generation Turkish, Sweden	- Negative attitudes towards psychotherapy.	
Calliess et al., 2007	Middle-highly educated, young, female and male, second-generation Turkish, <u>oriented towards the Turkish culture</u>, Germany	- Negative attitudes towards psychotherapy (e.g., less openness and, especially among women, fear of stigmatization due to psychotherapy).	- Culture-sensitive psychotherapeutic education.
Heredia Montesinos et al., 2012	Female, first-generation Turkish, Germany	- Fear of stigmatization because of depressive symptoms (not somatic symptoms)	
Mösko et al., 2011	Turkish inpatients, Germany		- Use of migration background-oriented treatment interventions.
Schouler-Oçac et al., 2010	Turkish psychiatric outpatients, Germany		- Easier accessibility to mental health care, encouraged by social measures (expense reduction) of mental health care. - Development of culturally adapted therapies.
Unlu Ince et al., 2013	Mostly first-generation Turkish, The Netherlands		- Provision of easily accessible (e.g., internet-based, in native language), flexible treatments. - Warranty of privacy and anonymity during treatment.
Access to mental health care for depressive symptoms – Turkish and Moroccan immigrants			
Fassaert et al., 2009	Low SES, Community Turkish, Moroccan, The Netherlands	- Self-reliance. - Low levels of health literacy. - Pessimism.	
Nap et al., 2015	Turkish, Moroccan outpatients, The Netherlands	- Traditional acculturation (fewer skills, more traditional norms and values) related to passive medical care needs (drug prescription, expert problem clarification, advice, guidelines), and not to psychological care needs (support, insight, regain control, reality contact, feelings and thoughts expression).	

Table 4. Continued

Study	Immigrant sample, study country	Potential obstacles	Potential facilitators
Therapeutic success for depressive symptoms – Turkish immigrants			
Baarnhielm and Ekblad, 2000	Low SES, female, first-generation Turkish, Sweden	- Troubles and dissatisfaction understanding therapists (jargon, psychological illness models and arguments for treatment). - Low internal locus of control to influence recovery. - Psychological attributions, which were associated with badness, lack of self-control, and shame. - Reluctance to talk about use of traditional methods.	- Sense of trust and being trusted and understood by the therapists. - Family as social support
Mösko et al., 2008	Turkish inpatients, Germany	- Higher levels of psychological distress. - Higher social burden (e.g., lower education, unemployment, longer disability duration, lower language proficiency). - Turkish nationality. - Non-responders dropped out 5 times more often.	
Mösko et al., 2011	Turkish inpatients, Germany	- Higher levels of psychological distress (e.g., comorbidity with personality disorder). - Higher social burden (e.g., unemployment, in welfare, longer disability duration). - Shorter treatment duration. - Higher symptom severity at baseline. - Turkish background.	- Use of migration background-oriented treatment interventions that address the initial psychosocial burden.
C. Nickel et al., 2006	Turkish inpatients, Germany	- High comorbidity with somatic-symptom and anxiety disorders. - Late referral to specialized care, which could be related to illness chronicity and negative prognosis.	- Use of eclectic therapeutic approaches including treatment elements in the mother tongue, non-verbal interventions (e.g., involving music, dance, physio-, movement, bioenergetic therapy), and combination of gestalt therapy, individual and group psychotherapy sessions. - Regular psychosomatic training of physicians. - Illness prevention measures targeting the labor immigrant population.
M. Nickel et al., 2006	First-generation, Turkish inpatients, Germany		- Treatment in the mother tongue. - Ethnic-matching

Table 4. Continued

Study	Immigrant sample, study country	Potential obstacles	Potential facilitators
Reich et al., 2005	Mostly first-generation, Turkish psychiatric inpatients, Germany	- Low internal locus of control, high external locus of control. - High fatalistic (e.g., bad luck), and supernatural (e.g., god, evil spirits) illness attribution predicted lower motivation and expectation of healing with psychotherapy. - Expectation to assume a passive role during psychotherapy. - Higher levels of psychological distress.	- Expectation to benefit more from pharmacological treatment. - Address motivation and illness beliefs early on to select/ adjust treatment.
Renner and Berry, 2011	Mostly first-generation, female Turkish patients with recurrent depression, Austria	- Older age - Recently arrived to host country.	- Culturally adapted treatment interventions, in line with patient's expectations and considering demographic characteristics within the ethnic minority group (e.g., older women) and migration status (e.g., recently arrived in the host country). - Outpatient setting.
Schouler-Ocak et al., 2010	Turkish outpatients, Germany	- Higher levels of psychological distress. - High social burden (e.g., younger, more sick-days). - Shorter treatment duration.	- Culturally adapted therapies.
Siller et al., 2017	Mostly first-generation, female Turkish patients with recurrent depression, Austria	- Higher levels of psychological distress. - High social burden (e.g., complex living situation, feelings of helplessness and uncontrollability). - Indication of illness 'secondary gain' (e.g., attention of husband).	- Long-term treatment that also encloses empowerment on a familial and societal level. - Enrichment of the social capital and network (e.g., therapy groups). - Gaining emancipation. - Consider issues of trust to decide whether an individual or a group treatment is suitable.
Zollmann et al., 2016	Older adults, Turkish in- and outpatients, Germany	- Older age, - Higher social burden (e.g., low income, work disability before treatment), especially among women. - Language and communication problems	
Success of treatment for depressive symptoms – Turkish and Moroccan immigrants			
Fassaert et al., 2009	Low SES, Turkish, Moroccan community individuals, The Netherlands	- Turkish-Dutch experienced discordance between their higher need for care and the care received (e.g., social intervention). - Moroccan-Dutch received social skill interventions less often than desired. - Discordance was explained by higher levels of psychological distress.	- Attunement of the provided care to the reported care needs. - Moroccan-Dutch reported less need for drugs, information and referral.

Table 4. Continued

Study	Immigrant sample, study country	Potential obstacles	Potential facilitators
Fassaert, Nielen et al., 2010	Turkish, Moroccan general practice patients, The Netherlands	- Ethnic minority patients –in interaction with other sociodemographic factors-were less likely to be treated according to clinical guidelines. - Language proficiency could have an impact on the patient-provider communication.	- Mental health care adapted to suit clients from varied cultures
Fassaert, Peen et al., 2010	Turkish, Moroccan in- and outpatients, The Netherlands	- Lower treatment intensity (number of contacts per month). - Higher dropout levels from depression treatment (17.5% and 15.5%, vs. 12.4% in the natives) explained by depression severity and demographic factors, but the change in effect sizes was sometimes negligible. - Older age, living in highly urbanized areas, lower comorbidity were related to worse concordance urgency-waiting time.	- Female gender, older age, severe, recurrent depression (predicted lower dropout rate). - Promotion of culturally-sensitive approaches in mental health services.
Nap et al., 2015	Turkish, Moroccan, The Netherlands	- Higher symptom severity at baseline	- Participation in the society / higher cultural adaptation related to better treatment outcomes.

showed that the group receiving additional bioenergetic therapy showed a greater reduction of somatization as well as of depressive, anxiety and hostility symptoms. They also showed a greater improvement regarding anger levels and anger expression (more directed outwards than inwards; M. Nickel et al., 2006). This is the only documented study examining the effectiveness of the working elements of eclectic psychosomatic rehabilitation programs.

Three other WQ German studies examined the effectiveness of the psychosomatic rehabilitation programs mentioned above, though without any control- or another intervention group (Mösko et al., 2011; C. Nickel et al., 2006; Zollmann, Pimmer, Rose, & Erbstosser, 2016). Intention-to-treat analyses revealed significant improvement of Turkish-German patients at discharge on depressive, somatic, anxiety, and phobic symptoms, as well as paranoid ideation, psychoticism, hostility and the global severity index (C. Nickel et al., 2006; Zollmann et al., 2016). There was no reduction of obsessive-compulsive symptoms or interpersonal difficulties, and poor to moderate improvement on socio-medical indicators (e.g., the percentage of patients employed, number of working hours/ weeks; C. Nickel et al., 2006). This study excluded unemployed patients (students, housewives, retired patients), which might have affected the external validity of the findings. Compared to native Germans and other immigrant groups,

Turkish-Germans showed similar symptom reduction in two studies, including one with a large national sample (Mösko et al., 2011; Zollmann et al., 2016). However, Turkish-German patients showed the smallest treatment effect sizes regarding depression, other symptoms and general psychopathology in a small sample (Mösko et al., 2011). Moreover, Turkish-German patients showed a lower reintegration into working life after treatment than native German did (Zollmann et al., 2016).

Obstacles and Facilitators for Treatment Accessibility and Therapeutic Success

There were few and mixed results regarding the access and utilization of psychiatric services by immigrant patients – including Turkish-German. One WQ study found that the proportion of immigrants receiving psychosomatic rehabilitation (2.7%) was smaller than the 8.2% expected based on German public health information (Mösko et al., 2011). Nevertheless, two other WQ studies (one including a large national sample of users of psychosomatic rehabilitation and one in a general psychiatric outpatient setting) found that Turkish-German patients (especially women) made higher use of psychosomatic rehabilitation compared to native Germans, other immigrant groups, and to the expected rate according to the national migration figures (Schouler-Ocak et al., 2010; Zollmann et al., 2016).

Obstacles and facilitators for accessing mental health care

Table 4 shows the detailed findings of studies examining possible obstacles and facilitators for accessing mental health care. The most commonly mentioned obstacles (in MQ and WQ studies) were related to negative attitudes towards psychotherapy, including fear of stigmatization and pessimism, which were mentioned by Turkish-Dutch, Turkish-German, Turkish-Swedish, and Moroccan-Dutch respondents and patients of the first and the second generation, especially those more oriented towards their culture of descent (Baarnhielm & Ekblad, 2000; Calliess, Schmid-Ott, Akguel, Jaeger, & Ziegenbein, 2007; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009; Heredia Montesinos et al., 2012). Turkish- and Moroccan-Dutch groups also reported (in MQ studies) that 'self-reliance' and little knowledge of the mental health care system were obstacles for accessing mental health care (Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009). Also, patients reporting more traditional norms and values expressed more passive medical care needs than they reported psychological care needs (Nap et al., 2015).

Among possible facilitators of mental health care accessibility, authors mentioned (recent) social measures covering mental health care expenses (Schouler-Ocak et al., 2010) and the development of more easily accessible (e.g., online) and culturally appropriate therapies (Calliess et al., 2007; Fassaert, Nielen, et al., 2010; Mösko et al., 2011; Schouler-Ocak et al., 2010; Ünlü Ince et al., 2013).

Obstacles and facilitators for therapeutic success

Table 4 also shows the obstacles and facilitators for positive treatment outcomes. At least 70% of the studies, of MQ and WQ, mentioned the difficult starting position of Turkish-German,

Turkish-Swedish, Turkish-Dutch and Moroccan-Dutch patients as a potential obstacle for in- or outpatient treatment success. Immigrant (Turkish) patients accessed specialized inpatient psychiatric care after 7 years from the start of complaints and after other psychotherapy treatments, which might have increased the chronicity and severity of the illness and negatively affected the prognosis (C. Nickel et al., 2006). Turkish patients also showed the highest levels of psychological symptoms and socioeconomic adversity before treatment compared to natives and other immigrant groups (Mösko et al., 2011; Mösko, Schneider, Koch, & Schulz, 2008; Nap et al., 2015; C. Nickel et al., 2006; Reich, Bockel, & Mewes, 2015; Schouler-Ocak et al., 2010; Siller et al., 2017), which in some studies was found predictive of worse treatment outcomes (Mösko et al., 2011; Nap et al., 2015; Zollmann et al., 2016) and also of higher dropout among Turkish- and Moroccan-Dutch (Fassaert, Nielen, et al., 2010). Therapy non-responders reported low German language proficiency, had a Turkish nationality and appeared to drop out more often than responders did (Mösko et al., 2008).

Other obstacles to positive treatment outcomes were related to the patients' illness explanatory models, the interaction of patients with providers, and the quality and characteristics of the care provided. It was salient that Turkish patients reported low internal and high external locus of control and attributional theories (Baarnhielm & Ekblad, 2000; Reich et al., 2015; Siller et al., 2017), which predicted lower expectation of healing due to psychotherapeutic treatment (Reich et al., 2015) and was associated to high acceptance, utilization, and trust in traditional methods, family, and Turkish doctors (Baarnhielm & Ekblad, 2000; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009). Also, Turkish-German psychiatric inpatients, compared to natives, expected to assume a mainly passive role during psychotherapy and to benefit more from pharmacological treatment (Reich et al., 2015). Furthermore, a Dutch study found that Turkish-Dutch individuals more often experienced general discordance between their perceived care need and the care they received than natives did, which was partly explained by baseline symptom differences (Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009).

Regarding the characteristics of the provided care, one MQ study in the Netherlands showed that GP's did not meet the guidelines for referral and prescription of medication with Turkish- and Moroccan-Dutch patients as often as with natives. This result was accounted for by the patients' age, gender, marital status, and the statistical dependency of patients within general practices (inter-practice variation; Fassaert, Nielen, et al., 2010). Another MQ study found that Turkish- and Moroccan-Dutch patients receiving secondary care had lower treatment intensity compared to natives, also after adjusting for demographics and illness severity (Fassaert, Peen, et al., 2010). In Germany, two WQ studies found that Turkish-German had the shortest treatment duration in inpatient psychosomatic rehabilitation and general outpatient care (Mösko et al., 2011; Schouler-Ocak et al., 2010), however, this finding was not confirmed by a recent, also WQ study with a much larger sample (Zollmann et al., 2016). The latter study also showed that receiving the same type of treatment or treatment duration as the native group did was not necessarily a facilitating factor of therapeutic success. Turkish-German still showed worse mental health and work outcomes (Zollmann et al., 2016).

Factors facilitating therapeutic success included a participatory acculturation strategy in the Netherlands (Nap et al., 2015) and younger age and longer duration of stay in Austria (Renner & Berry, 2011), which were factors predictive of greater symptom reduction during or after treatment for depression. Furthermore, female gender, having a recurrent, more severe depression, and being older predicted less dropout (Fassaert, Nielen, et al., 2010). Additionally, authors advised therapies adapted (at all levels) to the individual needs, cultural expectations, explanatory models, and the higher levels of psychological symptoms and socioeconomic adversity of (Turkish) immigrant patients (e.g., M. Nickel et al., 2006; Renner & Berry, 2011; Siller et al., 2017).

Discussion

The aim of this review was to systematically evaluate the state of the art regarding the symptom manifestation, the treatment effectiveness, and the obstacles and facilitators for therapeutic success for Turkish and Moroccan immigrant populations with depressive disorders or symptoms in Europe. Doing so, we strove to highlight the aspects of diversity that are at the intersection of the social position and mental health of these populations, to assess the quality of the conclusions, and to formulate implications of the findings for culturally and diversity-sensitive clinical practice.

Depression Manifestation or Related Idioms of Distress

Findings pointed towards a combined profile of symptoms for Turkish populations, in which depressive, anxiety and somatic symptoms (especially pain) play a prominent role (Baarnhielm & Ekblad, 2000; Borra, 2011; Heredia Montesinos et al., 2012; Sariaslan et al., 2014; Spijker et al., 2004). Irritability, hallucinations and suicidality also appeared relevant, though inconsistently reported by Turkish individuals (Beutel et al., 2016; Borra, 2011; Morawa & Erim, 2014a; Sariaslan et al., 2014), whereas Western concepts, such as worthlessness, guilt, self-criticism, and self-deprecation were less frequently endorsed (Sariaslan et al., 2014; Schrier et al., 2010).

There were few studies on the symptom profile of Moroccan-Dutch, and (in contrast to Turkish populations) there were no studies assessing somatic disorders among Moroccan patients with depression. The current, moderate quality studies indicated that Moroccan-Dutch more often reported some specific symptoms, such as anhedonia, poor appetite, and suicidal ideation than native patients did, and that they report a combination of depressive and somatic symptoms (Schrier et al., 2010; Smits et al., 2005; Spijker et al., 2004). These findings were in agreement with findings worldwide that show that somatic complaints are commonly reported as depression features (Haroz et al., 2016); however, the findings based on factor structure analyses showed a more intertwined character of depressed affect and somatic symptoms only for the Turkish and Moroccan samples (Spijker et al., 2004).

Stemming from studies with Turkish populations, some findings indicated that patients were more likely to report those symptoms that were more accepted, recognized or reinforced

in their specific living and cultural context (Akbiyik et al., 2009), which might explain why Turkish immigrant patients reported more depressive and less hostility, anxiety or interpersonal symptoms than Turkish nationals did (Akbiyik et al., 2009). Also, some studies found that individuals feared stigmatization and felt embarrassment, especially related to depressive and psychological symptoms, and less to somatic symptoms (Borra, 2011; Heredia Montesinos et al., 2012; Smits et al., 2005), which might influence symptom presentation. Furthermore, qualitative studies showed that Turkish women adapted their symptom presentation or idioms of distress to the level of understanding of their therapist (Baarnhielm & Ekblad, 2000), which highlights the importance of doctor-patient interactions for symptom manifestation. Despite the fact that Turkish and Moroccan often reported higher psychopathology compared to natives, the only study on functional status showed that their level of disability was comparable to that of the natives (Schrier et al., 2010); however, no conclusion can be yet drawn regarding the association between the level of psychopathology and the level of functioning.

Based on the current findings, we cannot draw conclusions on whether any of the mentioned factors related to symptom manifestation could affect disorder rates and associated health care utilization, or whether they could be of influence regarding the effectiveness of treatments. To explore the underlying mechanisms and test potentially relevant hypotheses, such as the "immigrant paradox", which suggests that immigrants of the first generation are less at risk of developing psychological disorders than the native populations or the second generation are (e.g., Lara, 2014; Sam, Vedder, Liebkind, Neto, & Virta, 2008), more research is needed, based on a multilevel approach involving individual, group as well as country data (Duckers, Alisic, & Brewin, 2016; McNally, 2018).

Treatment Effectiveness, Obstacles, and Facilitators for Therapeutic Success
The research on treatment effectiveness of Turkish immigrant groups in Europe was still scarce and heterogeneous, and non-existing in Moroccan groups. Also, there were no reports on the effectiveness of pharmacotherapy in these groups. Based on the three available RCTs, group CBT, (culturally adapted) self-help groups (Renner & Berry, 2011), or online culturally adapted problem-solving therapy (Ünlü Ince et al., 2013) were not effective in (durable) reducing depressive symptoms in Turkish immigrant groups. Only bioenergetic therapy (interventions on a physical level) showed an additional value to psychosomatic rehabilitation (individual and group gestalt, behavioral and social therapy offered in the patient's preferred language; M. Nickel et al., 2006). The combination of both therapies appeared more effective in reducing depressive and psychosomatic symptoms compared to only psychosomatic rehabilitation (M. Nickel et al., 2006). Psychosomatic rehabilitation alone was also found effective in improving the mental health of Turkish-German inpatients (Mösko et al., 2011; C. Nickel et al., 2006; Zollmann et al., 2016), but the studies were of low quality and lacked reference groups. Nonetheless, making allowance to this very limited state of the art, one may conclude that there is no convincing evidence on the effectiveness of -evidence-based- treatments (whether or not they are 'culturally adapted') for depression in Turkish-European groups.

The RCT findings were, on the one hand, somewhat unexpected, given that there are some positive results of standard, or culturally adapted, evidence-based therapies in the treatment of other ethnic minorities (Antoniades, Mazza, & Brijnath, 2014; Huey et al., 2014; Ünlü Ince, Riper, et al., 2014). On the other hand, these findings represent more evidence of the fact that the effectiveness of psychotherapy for depression still needs general improvement, since its success rate across all sample types is only 14% higher compared to the natural illness course (Cuijpers & Cristea Ioana, 2015; Cuijpers et al., 2014).

The non-significant treatment outcomes might be related to the high attrition rate and small sample sizes (Renner & Berry, 2011; Ünlü Ince et al., 2013). The low treatment effectiveness might also be related to the discussed obstacles for therapeutic success or positive treatment outcomes, especially those indicating that Turkish and Moroccan immigrants start treatment with disadvantage at the intersection of ethnicity, higher social burden and higher levels of psychological distress (e.g., Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009; Mösko et al., 2011; Mösko et al., 2008; Reich et al., 2015), which predicted higher perceived care needs (Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009), worse treatment outcomes (Mösko et al., 2011; Nap et al., 2015) and higher dropout (Fassaert, Peen, et al., 2010). Among factors contributing to social burden, perceived ethnic discrimination has appeared as an important predictor of higher levels of depression in Turkish and Moroccan immigrant populations (e.g., Ikram et al., 2016; Ikram et al., 2015; van Dijk et al., 2011), and it might be a mediating factor of (poor) treatment outcomes. It is possible that the examined therapies did not provide the patients with enough insights or practical guidance to cope with the social hardship and acculturation challenges they face, or that therapies were not compelling enough to help improve their various symptoms of depression. In the future, a more in-depth analysis of the effect of disorder and symptom comorbidity might also shed some light on why the examined therapies did not work. Furthermore, persistent cognitive patterns, such as fear of stigma related to mood depressive symptoms (Heredia Montesinos et al., 2012) and psychological attributions (Baarnhielm & Ekblad, 2000), might have represented an insurmountable challenge for short therapeutic treatments as the ones studied. Some authors have also hypothesized that symptoms have an adaptive function in the living context (e.g., secondary gain), so reduction of symptoms might not be feasible before changing the familial or social context (Siller et al., 2017).

Important barriers to accessing (psychological) treatment included more need for and reliance on passive medical care (Nap et al., 2015), negative attitudes towards psychotherapy, such as less openness to, and lower expectation of recovery after psychotherapy (Baarnhielm & Ekblad, 2000; Calliess et al., 2007; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009), especially among individuals more oriented to the Turkish culture (Nap et al., 2015), and women fearing stigma due to psychotherapy (Calliess et al., 2007; Heredia Montesinos et al., 2012). These findings complemented results in other clinical populations showing that expectation of therapeutic improvement is a key predictor of improvement of depressive symptoms (Rutherford, Wager, & Roose, 2010). Among obstacles for therapeutic success, the most salient were low internal locus of control (Baarnhielm & Ekblad, 2000; Reich et al., 2015), high levels of

psychological distress (Mösko et al., 2011; Mösko et al., 2008; Reich et al., 2015; Schouler-Ocak et al., 2010; Siller et al., 2017), comorbidity (C. Nickel et al., 2006), and high social burden (Mösko et al., 2011; Mösko et al., 2008; Schouler-Ocak et al., 2010; Siller et al., 2017; Zollmann et al., 2016). Further research examining the mechanisms through which clinical, social and demographic factors affect the therapeutic success of Turkish and Moroccan immigrant patients is also necessary.

Implications for Clinical Practice

The symptom profile of depression for Turkish and Moroccan appeared broader than it was specified by the DSM-IV and DSM-5. Next to the 'typical' core depressive symptoms (i.e., sadness, depressed mood, loss of vitality; Heredia Montesinos et al., 2012; Sariaslan et al., 2014), service providers should be alert for a more mixed presentation of affective and somatic aspects of depression by Turkish and Moroccan patients (Akbiyik et al., 2009; Baarnhielm & Ekblad, 2000; Deisenhammer et al., 2012; Sariaslan et al., 2014; Spijker et al., 2004), that also include anxiety symptoms (Borra, 2011; Heredia Montesinos et al., 2012), irritability (especially for Turkish groups; Borra, 2011; Morawa & Erim, 2014a; Sariaslan et al., 2014), higher suicidal ideation (Beutel et al., 2016; Sariaslan et al., 2014; Schrier et al., 2010), and somatic complaints (Sariaslan et al., 2014). Turkish and Moroccan patients reported embarrassment and concerns about being stigmatized due to suicidal ideation and behavior, and other depressive and psychological distress symptoms, such as hallucinations (Borra, 2011; Smits et al., 2005). An open, non-judgmental and informative dialogue in order to assess symptoms and engage patients in treatment seems advisable to overcome the initial gap.

Furthermore, based on two RCT studies, culturally adapted, problem-solving self-help groups, online interventions, and CBT-groups might not be effective for Turkish immigrant patients (Renner & Berry, 2011; Ünlü Ince et al., 2013), at least regarding symptomatic improvement (Siller et al., 2017). Though the RCT and prospective studies examining eclectic psychosomatic rehabilitation programs in the patients' mother tongue, also integrating bioenergetic therapy, showed some positive results on depressive and psychosomatic symptoms, the low quality and small amount of the studies hampers formulating recommendations for clinical practice (C. Nickel et al., 2006; M. Nickel et al., 2006).

In light of the limited effectiveness of the so-called 'evidence-based' therapies and shaping clinical practice with Turkish and Moroccan immigrants with depression, clinicians might do well in considering the facilitating factors for care access and therapeutic success discussed in this review. Among facilitators for accessing treatment, offering coverage of mental health care expenses (Calliess et al., 2007; Schouler-Ocak et al., 2010) and offering interventions in the native language to lower the threshold for seeking mental help (Ünlü Ince et al., 2013) have been recommended.

Facilitators for therapeutic success might include offering a more intensive, tailored therapy to patients with severe disorders at baseline (Nap et al., 2015). Promoting societal participation also influences positively the treatment outcome (Nap et al., 2015). Additionally, according to

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traditional roles, older group leaders might be preferred to lead therapy groups, especially for older Turkish women (Renner & Berry, 2011). Interventions in evidence-based treatments could also offer a space for discussing traditional practices, such as carrying amulets or visiting traditional healers (Baarnhielm & Ekblad, 2000), and topics such as running a household, feelings of isolation and social difficulties, especially those concerning family, husband and children (Renner & Berry, 2011; Siller et al., 2017), which appeared especially relevant for first-generation, female, Turkish-Austrian patients. Furthermore, Turkish women considered it important for their recovery that their clinicians trusted them, listened to them calmly, and took them seriously (Baarnhielm & Ekblad, 2000).

Other possible facilitators of therapy success were exploring both the clients' and practitioners' illness beliefs and attributional styles (Baarnhielm & Ekblad, 2000; Reich et al., 2015) with a vocabulary matching the patients' education level (Baarnhielm & Ekblad, 2000). It appeared also relevant to discuss motivational and acculturation issues before and during the therapy (Baarnhielm & Ekblad, 2000; Calliess et al., 2007; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009; Nap et al., 2015; Reich et al., 2015). Since low levels of mental health care literacy (Baarnhielm & Ekblad, 2000), stigma (Calliess et al., 2007), and difficulties understanding therapists' vocabulary and health models (Baarnhielm & Ekblad, 2000) were mentioned as important obstacles for treatment, more information provision about mental health care and its methods, and reassurance regarding privacy (Ünlü Ince et al., 2013) using vocabulary matching the patients' capacities is warranted. Also, interventions aiming at balancing internal and external locus of control might help immigrant groups, especially Turkish patients, to gain control of the difficulties they may face (Baarnhielm & Ekblad, 2000; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009; Reich et al., 2015; Siller et al., 2017). However, most of these facilitators still need to be properly examined in prospective, controlled, adequately powered studies.

Summing up, practitioners need to assess and explore (with their patients) the patients' particular situation and needs aiming at identifying the treatment approach and therapeutic interventions that best match each individual patient. Also, considering contextual factors and being sensitive to the specific needs of more vulnerable or resilient subgroups due to the intersections between dimensions of diversity (e.g., older women, second generation, younger, Moroccan men) is recommended to tailor mental care. To this purpose, clinicians are advised to use available assessment instruments, which can be specifically designed for these groups, such as the Dutch Diagnostic Interview for Turkish women (Borra, 2005), or for broader communities, such as the DSM-5 Cultural Formulation Interview (APA; 2013), which has shown a good acceptability among clinicians and patients across different countries (Lewis-Fernandez et al., 2017).

Concerning the facilitators of treatment and implications for clinical practice, a warning statement is warranted. The purpose of this review was to bundle and evaluate existing research findings and to translate them to guidelines that could improve the therapeutic interaction with Turkish and Moroccan immigrant groups. These guidelines should not be considered a 'cookbook', promoting stereotyping. Across the studies, it became clear that Turkish and

Moroccan immigrants are different, but also similar to natives on a variety of aspects. There were also important between-, and within-group, and contextual (e.g., country, setting) differences.

Strengths

This review has some strengths. To our knowledge, it is the first review that addresses the mental health status concerning depression in large (Turkish and Moroccan) immigrant populations in Europe, with attention for diversity factors that point towards more vulnerable or resilient subgroups within these populations. Even though this review examined the mental health status of two immigrant groups, we excluded studies analyzing Turkish and Moroccan individuals together, which is an understandable practice to increase statistical power, but present misleading results that assume that both groups behave similarly. Due to our method, we could compare between these groups with similar migration history and make their uniqueness clear. Additionally, we highlighted the within-group characteristics whenever intersectionality was present (or analyzed and reported in the studies). Furthermore, the literature was systematically reviewed and the methodological quality of all included papers was assessed with a standardized checklist of predefined quality criteria by the authors.

Limitations

This review also has some limitations. First, our review aimed to include only articles of known relevance to Turkish and Moroccan immigrant populations in Europe with depression or depressive symptoms. Thus, studies on obstacles and facilitators for therapeutic success for other psychiatric conditions and in other immigrant groups were not considered. Second, the number of retrieved studies examining Moroccan samples was worryingly low, which might be due to the absence of studies from e.g., France or Italy in this review, which are countries with a large Moroccan immigrant population. Despite the open-language search strategy, no papers from these countries were found, which limits the generalizability of the results that might be drawn on a European level, especially concerning Moroccan immigrants. It is possible that the research conducted in countries such as France or Italy did not reach the mined databases and that a future review should target the grey literature to overcome this problem. Third, the results of Turkish immigrants were mostly based on evidence from poorly educated, first-generation Turkish women and older Turkish immigrants in Germany, the Netherlands, Austria, and Sweden. Given the fact that the current Turkish population in Europe is far more diverse than the examined samples were (e.g., 30% of young, second-generation Turkish citizens of Amsterdam achieve tertiary education; Crul, 2016), our findings should be generalized with caution to other subgroups. Research on those less well-covered subgroups would be a welcome addition to the literature body. Additionally, important topics fell out of the scope of the current review, namely bipolar or psychotic symptoms, health-related depression and a throughout discussion on suicide (ideations), which might be relevant for adequate mental health care for Turkish and Moroccan European immigrants with depression.

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Furthermore, the comparability of studies was limited. Different instruments were used to assess depression, or establish a psychiatric diagnosis. Only a few studies used cross-culturally valid questionnaires or (culturally-sensitive) structured diagnostic interviews based on diagnostic manuals, such as the ICD-10 or the DSM-IV/-5. Also, some studies based their conclusions on general population samples, whereas others focused on in- or outpatients. Importantly, very few studies examined possible interactions or moderating effects of aspects of diversity to explain their findings, which hindered drawing many conclusions on the intersectional level.

Conclusions

Turkish and Moroccan immigrants were similar to natives in their symptomatic manifestation of depressive symptoms in all domains, but some symptoms such as irritability and suicidality were more prominent in these minority groups. Also, these immigrant populations more often reported combined mood and somatic symptoms (as well as anxiety in the case of Turkish groups) and higher levels of psychopathology, including higher levels of somatic symptoms. More research on treatment effectiveness for these groups is urgently needed, including effectiveness of pharmacotherapy. There is currently no strong evidence of the effectiveness of the examined therapeutic interventions for the treatment for depression in Turkish immigrants, whereas no intervention has been examined in Moroccan immigrants. The most salient obstacles for therapeutic success included the high levels of psychological symptoms at baseline, facing social hardship, receiving lower quality of treatment, and patients' negative attitudes towards psychotherapy, and high external locus of control, especially among those more oriented towards their original culture. Factors facilitating therapeutic success included the adaptation of treatments to patients' illness beliefs, their cultural and individual expectations, and to the difficulties in their social situation. However, most of these factors still need to be properly investigated.

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Evidence-based treatment for ethnic minority patients in routine clinical practice: A pilot study testing the effectiveness of CBT and IPT in native, Turkish- and Moroccan-Dutch patients with depressive symptoms

Abstract

Objectives

Cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT) are evidence-based treatments for depression in mainstream populations, but less is known about their effectiveness for ethnic minorities in naturalistic settings. In this retrospective, pilot study, we examined the effectiveness of CBT and IPT for Turkish- and Moroccan-Dutch patients in routine clinical practice, considering also other diversity factors.

Methods

We compared the pre- and posttest levels of depression severity, psychological distress, quality of life, and client satisfaction and dropout rate of native (n=88 in IPT; n=158 in CBT), Turkish- (n=17 in IPT; n=29 in CBT), and Moroccan-Dutch (n=12 in IPT; n=21 in CBT) outpatients with depressive symptoms. The data were analyzed with analysis of variance and mixed linear regression modeling.

Results

All ethnic groups, after both treatments, showed a decrease in depression severity over time. Native and non-native patients showed lower psychological distress after IPT than CBT, but non-native patients and patients with higher baseline psychological distress showed higher dropout of IPT. Non-native patients reported higher depression severity and psychological distress and lower quality of life than natives did. Ethnic groups were similar in their (low-moderate) satisfaction with treatment. Unemployment and lower education contributed to higher, and antidepressants use to lower symptoms levels.

Conclusions

Choosing CBT over IPT might be justifiable for Turkish- and Moroccan- Dutch patients with depressive and other varied comorbid symptoms; however, replication with a larger non-native sample is warranted. Ethnicity, in interplay with other sociodemographic factors, is related to the non-native's higher psychopathology and lower quality of life.

Keywords: Moroccan migrants; Turkish migrants; treatment effectiveness; depression; CBT; IPT; naturalistic design.

Introduction

From a public health- and human rights perspective, equal access to appropriate care for all ethnic groups is a high priority in Western countries. Given the high numbers of non-western migrants and refugees (UNHCR, 2016), and the high prevalence of psychopathology among these groups (Ladin & Reinhold, 2013; Lindert, Ehrenstein, Priebe, Mielck, & Brahler, 2009), a crucial question nowadays is whether evidence-based mental health interventions are suitable and effective for ethnic minority patients.

Moroccan and Turkish migrants constitute the largest non-western immigrant populations in the Netherlands, Belgium (CBS, 2013; Levecque, Lodewyckx, & Vranken, 2007), Germany (Schouler-Ocak et al., 2010; Statistisches Bundesamt, 2013), and France (INED, 2013). From the late 1950's, both groups migrated to Western Europe for economic reasons, and later on for family reunification and formation (Levecque et al., 2007). Concerns have been raised about the unfavorable socioeconomic position many of them face (Crul, 2016; M. Thomson & Crul, 2007), their high report of psychological symptoms (Sempértegui, Knipscheer, et al., In preparation; van de Beek, van der Krieke, Schoevers, & Veling, 2017), whereas there is still very limited information about their mental health care utilization and outcomes (Mösko et al., 2016; Sempértegui et al., 2019).

Prevalence and Manifestation of Depression among Immigrant Populations

Many authors reported associations between migration and depressive symptoms (Bhugra & Ayonrinde, 2004). Migration has been marked as a risk factor for social adversity, which underlies the connection with psychopathology (Jaya & Lincoln, 2016; Levecque et al., 2009; Selten et al., 2013). Within Europe, depression is often more prevalent among migrants - compared to natives-(Ladin & Reinhold, 2013; Sieberer et al., 2012), including Moroccan and Turkish migrants (Bengi-Arslan et al., 2002; Fassaert, Hesselink, & Verhoeff, 2009; Levecque et al., 2007; Sariaslan et al., 2014; Schrier et al., 2010; van der Wurff et al., 2004). Moreover, symptom manifestation may differ between ethnic groups, e.g., some non-Western migrants report more depressive and somatic symptoms than Western Europeans do (Aragona, Rovetta, Pucci, Spoto, & Villa, 2012). Turkish- and Moroccan migrants with depression also highly report somatic symptomatology (Deisenhammer et al., 2012; Levecque et al., 2007; Sariaslan et al., 2014; Spijker et al., 2004), and comorbid somatoform disorders (somatic-symptom disorders in the DSM-5; Erim, Morawa, Ozdemir, et al., 2011), which is why the population presenting with somatoform disorders is also relevant for the study of therapies effective to reduce depressive symptoms.

Treatment of Depressive Symptoms

First-choice evidence-based treatments for depressive symptoms in Western-Europe and North America are cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT). CBT assumes that erroneous beliefs, maladaptive information processing, and repetitive, negative thinking are related to depressive symptoms. Therefore, CBT focusses on correcting erroneous

beliefs and maladaptive thinking (Beck, Rush, Shaw, & Emery, 1979). IPT considers depressive symptoms as caused by conflicts in current interpersonal relationships; so its main focus is developing more satisfying, healthy relationships (Klerman, Weissman, Rounsaville, & Chevron, 1984). Both treatments have been proven effective in predominantly Caucasian populations (Barth et al., 2013; Jakobsen, Hansen, Simonsen, Simonsen, & Gluud, 2012), with ambiguous results regarding the effectiveness to reduce severe symptoms (Lemmens et al., 2015; Luty et al., 2007).

The therapeutic process with ethnic minority patients is usually considered to involve some particular complexities. Among others, patients' cultural-bound illness perception and beliefs, language barriers, less favorable socioeconomic starting conditions, and therapists' cultural influence on assessment, treatment and organization of health care have been appointed as important challenges (Lindert et al., 2008; Mösko et al., 2011; Reich et al., 2015; Schraufnagel et al., 2006). Nevertheless, a literature review of a convenience sample of RCTs and a meta-regression analysis of the association of the proportion of ethnic minorities with the studies' effect size suggested that psychotherapy effects were fairly robust regarding depressive symptoms and other disorders across cultural groups (Huey et al., 2014; Ünlü Ince, Riper, et al., 2014); albeit ethnic minority patients often showed lower functional outcomes (Brown, Schulberg, Sacco, Perel, & Houck, 1999; Miranda, Schoenbaum, Sherbourne, Duan, & Wells, 2004; Tang, Li, Rodgers, & Ballou, 2016). Also, a recent meta-analysis of RCTs comparing CBT and IPT for depressive disorders showed no significant difference in dropout rates (21.8% vs. 15.2%, respectively), also when the percentage of Caucasian patients was considered (Linardon, Fitzsimmons-Craft, Brennan, Barillaro, & Wilfley, 2018).

Despite the available evidence, there are still some uncovered gaps. Whereas CBT and IPT seem robust treatment methods, relatively little is known about their effectiveness for ethnic minorities when assessed in naturalistic contexts (Barth et al., 2013; Jakobsen et al., 2012; McMain, Newman, Segal, & DeRubeis, 2015), and in comparative studies (one study in meta-analysis; Ünlü Ince, Riper, et al., 2014). Also, most conducted studies have focused on the large racial groups in the USA (i.e., African, Hispanic, Asian, White; Bernecker, Coyne, Constantino, & Ravitz, 2017). Research about CBT's and IPT's effectiveness in Turkish- and Moroccan migrants in Western Europe is practically non-existing and thus inconclusive. Blom and colleagues (2010), including a small number of Moroccan and Turkish patients, found higher depression severity at both pre- and posttest, but similar decrease as in natives after IPT. On the other hand, a CBT group intervention was not found superior to self-help groups or wait-list in decreasing depressive symptomatology of Turkish-Austrian women (Renner & Berry, 2011).

Study Aim

In this study, we test, for native, Turkish- and Moroccan-Dutch patients, the effectiveness of CBT and IPT in reducing depression severity and psychological distress, and improving quality of life, taking sociodemographic factors into account. We also assessed clients' satisfaction with treatment and treatment adherence. To the best of our knowledge, this is the first study comparing the effectiveness of CBT and IPT for Turkish and Moroccan immigrant patients.

In face of the prevailing body of research on treatment effectiveness (although still relatively scarce for ethnic minorities and inconclusive for Turkish and Moroccan groups), we hypothesized CBT and IPT to be equally effective when compared to each other and among the three ethnic groups, i.e., we expected equal decrease of depression severity and psychological distress, equal increase of quality of life and equal dropout rate. Nevertheless, we expected Moroccan- and Turkish-Dutch to report higher pre-treatment symptom levels than the natives did. Finally, we expected client satisfaction to be lower among Turkish- and Moroccan-Dutch patients (e.g., Knipscheer & Kleber, 2005a).

Method

Study Design and Procedure

This pilot study had a retrospective case-control design and examined the electronic files with sociodemographic and clinical information of 325 outpatients (33 Moroccan-, 46 Turkish-, 246 native Dutch) that had been assigned to CBT or IPT based on their depressive symptoms (e.g., interpersonal difficulties or thinking problems) and their own preference, if any. Clinical and sociodemographic data were extracted from the electronic case register (containing daily clinical practice data registered by therapists) of two departments of a large Dutch mental health care institution in Rotterdam (see Figure 1 for the selection flowchart).

We selected files of patients aged > 18 years; with Moroccan-, Turkish- or native Dutch ethnicity, who started and finished IPT or CBT between January 2011 and March 2014; and of whom Routine Outcome Measurements (ROM) information was available. We defined ethnicity based on country of birth of both the patient and his/ her parents. 'Native Dutch' meant that the patient and both his /her parents were born in the Netherlands. Turkish- and Moroccan-Dutch ethnicity entailed first- and second-generation outpatients: those born in their country of origin, and those of whom one or both parents were born abroad (CBS, 2013), respectively.

We included selected file-cases with the following primary DSM-IV diagnoses: (a) major depressive disorder (with or without psychotic features) (b) dysthymic disorder, (c) depressive disorder not otherwise specified, (d) mixed depression and anxiety disorder, (e) complicated grief, (f) adjustment disorder with depressed mood or with mixed anxiety and depressed mood or not otherwise specified (g) undifferentiated somatoform disorder or pain disorder, with depressive symptoms, (h) somatization disorder and (i) conversion disorder.

Cases with (primary) diagnoses f-i were included only when depressive symptoms had been reported in their files. We excluded file-cases with the DSM-IV main or comorbid diagnoses a) bipolar disorder (I or II), b) schizophrenia and other psychotic disorders, (c) delirium, dementia, and amnesic and other cognitive disorders, (d) substance-related disorders, (e) dissociative disorders, (f) personality disorders. Additional exclusion criteria were: use of antipsychotic medication, receiving pharmacotherapy only, depressive disorder in remission, and non-existing ROM information. Throughout the process, the second and third author manually evaluated

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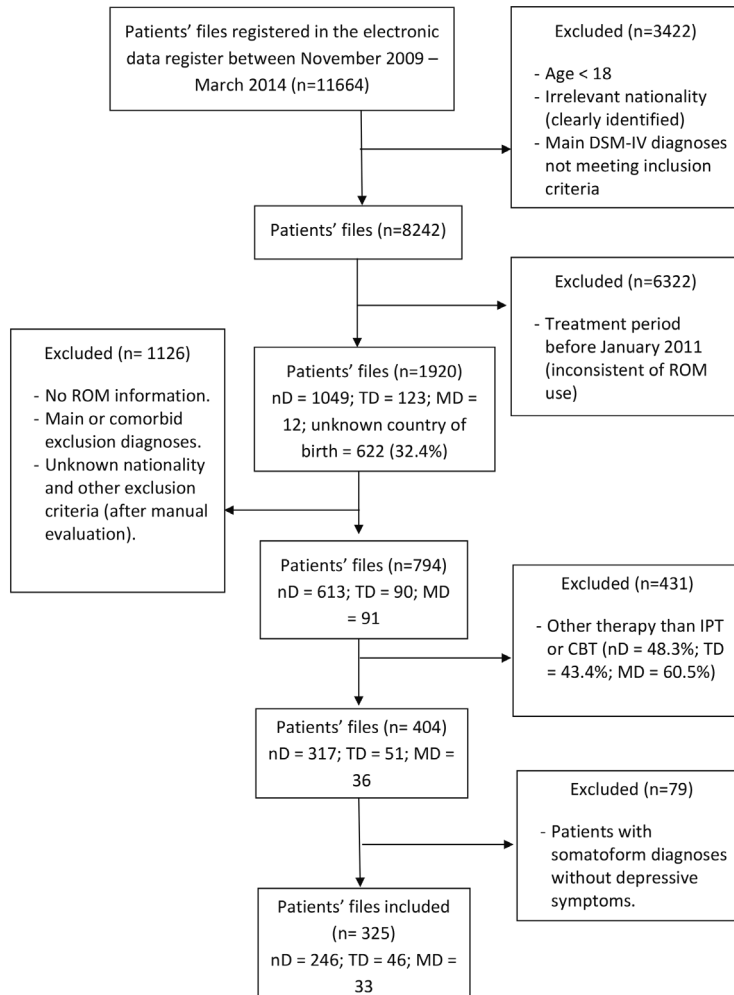
Figure 1. Selection procedure flowchart.
nD = native Dutch; TD = Turkish-Dutch; MD = Moroccan-Dutch.

files and completed (when available) missing information on education, ethnicity, marital status, medication use treatment type, and treatment dropout. Both authors were blind to the outcome data when reviewing the files.

For this study, using file-cases from clinical practice without a priory established study protocol, the Dutch law on medical research does not require patients to sign an informed consent. Patients' confidentiality was guaranteed by encoding their personal information. The study was approved by the Psychological Ethical Committee of Tilburg University and the Ethical Committee of the participating mental health care institute.

Outcomes and Instruments

Dutch mental health care uses ROM to depict, evaluate and improve health care. To this purpose, patients fill out questionnaires pre-, during (every two to six months) and posttest. In this study, the pre- (at start) and posttest data (closely after or at the end of the treatment) were used. The instruments Quick Inventory of Depressive Symptomatology-Self report (QIDS-SR; Rush et al., 2003), and 4Ks (Huijbrechts, Appelo, Korrelboom, van der Heiden, & Bos, 2009) are commonly used for ROM. The 4Ks entails four subscales derived from other instruments. We used the subscales psychological distress, quality of life, and client satisfaction and excluded the subscale illness-related costs.

Depressive symptoms
Depression severity was assessed with the QIDS-SR. The QIDS-SR comprises 16 multiple-choice questions, which are extracted from the 30-item Inventory of Depressive Symptomatology. The items present 4 choices indicating the severity of depressive symptoms. Cross-cultural validity has been assessed in Turkish-American students with satisfactory results (Mergen et al., 2011). Rush et al. (2003) reported Cronbach's alpha to be high (.86). In the current study, Cronbach's alpha at baseline was .74 for native Dutch, and .69 for Turkish- and Moroccan-Dutch together. The reliability in the Turkish-Dutch group was low (Cronbach's alpha = .58), probably due to the negative inter-total correlations of the items "sleep a lot", "sleep too little", "weight gain" and "weight loss". The reliability in the Moroccan-Dutch group was good (Cronbach's alpha = .81).

Psychological distress
We used the Short Complaint List (14 items; Lange & Appelo, 2007) to measure the burden of psychological symptoms. Thirteen items concern common symptoms in psychiatry. On a 5-point Likert-scale, patients indicated to which extent each symptom is experienced as a burden. As item 14, patients can mention their own symptom(s). Cronbach's alpha ranged .78-.85 across various studies (Huijbrechts et al., 2009; Lange & Appelo, 2007; Lange, Schrieken, van de Ven, & Blankers, 2000). Cronbach's alpha at baseline was .75 in the present study for native Dutch, and .74 for Turkish- and Moroccan-Dutch together. The reliability in the Turkish-Dutch group was fair (Cronbach's alpha = .69), whereas it was good in the Moroccan-Dutch group (Cronbach's alpha = .80).

Quality of life
Quality of life was measured with three questions adjusted from the Sheehan Disability index (Sheehan, 1983; e.g., "To what extent is your social life impaired by your symptom?") and a fourth question stemming from the Happiness Index (Abdel-Khalek, 2006). The first three questions are answered on a 10-point Likert-scale; the fourth on a 10-point visual analog scale. Higher scores indicate lower symptoms' impact on quality of life (after item reversion) and greater happiness, respectively. In an earlier study, Cronbach's alpha was .73 (Huijbrechts et al.,

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2009). In the current study, Cronbach's alphas at baseline were .82 for native Dutch, .71 for Turkish- and Moroccan-Dutch together, .35 for Turkish-Dutch only, and .82 for Moroccan-Dutch participants. Analyses of the inter-item and item-total correlations revealed that problems in the work domain were negatively related to family problems in the Turkish-Dutch group, and that life impairments were not necessarily related to unhappiness or vice versa.

Client satisfaction
The 4K's subscale client satisfaction examined to what extent patients are satisfied with their treatment, their therapist, and the institution's way to deal with their problems. Four questions are answered on a 10-point Likert-scale. The fourth item: "Would you recommend this institution to others with mental health problems?" is answered on a 5-point Likert-scale (transformed into a 10-point scale for the total score). Cronbach's alpha in an earlier study was .82 (Huijbrechts et al., 2009). In the current study, Cronbach's alphas for native Dutch (.93), Turkish- and Moroccan-Dutch together (.91), Turkish-Dutch (.91), and Moroccan-Dutch (.92) participants were good.

Treatment dropout
Available information on treatment discontinuation was manually controlled and completed if missing in the patients' files. Dropout was coded dichotomously and it was defined as early treatment termination without the therapist's agreement.

Covariates and Statistical Analyses
    Based on previous literature on treatment effectivity and cross-sectionality with depression, we selected a priori covariates: Global Assessment of Functioning (GAF) score, sex (male/female; Johnsen & Friborg, 2015) , marital status (in a relationship/single), education (low, mid-, high), age (years; Aichberger et al., 2012; de Wit et al., 2008; Sieberer et al., 2012; Uskul & Greenglass, 2005; van der Wurff et al., 2004) medication use (anti-depressant/other psychotropic drugs/ no drugs), employment status (employed/unemployed), comorbidity with anxiety (yes/no; Rizvi et al., 2015; Roca et al., 2011) and treatment duration (months; Hansen, Lambert, & Forman, 2002). Patients' files contained information on these variables. A minority of the IPT- or CBT-therapists (6.9% treating 17.8% of the patients) received a diversity-oriented competence training before the inclusion period. This variable was also tested as a covariate and did not contribute to the model fit in any of the analyses. We used bootstrapped one- and two-way ANOVA's or chi-square analyses, as appropriate, to compare participants' - baseline- sociodemographic and clinical characteristics, and differences in client satisfaction and treatment dropout rate between native and Turkish-Dutch receiving CBT and IPT. Treatment dropout was further investigated with a logistic regression analysis and Pearson correlations. *Effect sizes were presented in terms of Eta-squared, Cramer's V or phi coefficient.*

The effectiveness of CBT and IPT for native and Turkish-Dutch and for Turkish- and Moroccan-Dutch patients together (combined migrant group) was examined with mixed linear regression modeling, which enabled inclusion of cases with missing values, assuming that the missingness does not depend on the outcome variable but on other observed variables (i.e. the data is missing at random). The model predicting each dependent variable incorporated two levels: patients and time (measurements at pre- and posttest). A three-level model with therapist at level 3 did not converge. Time was coded 1 on the pre- and 2 on the posttest. Models were built hierarchically. First, models of every dependent variable included the fixed effects for time, treatment type, ethnic group -ethnicity-, and the effects of main interest in this study: a three-way interaction between ethnicity, treatment, and time, a two-way interaction between time and treatment, and a two-way interaction between time and ethnicity. The non-significant main or interaction effects were hierarchically excluded from the model. Second, we chose an unstructured or compound symmetry covariance matrix for the repeated measures (time) based on an assessment of the best model fit (expressed by the change in -2LL, AIC or BIC). Third, we tested the adjusted models including the significant main and interaction terms, and additional fixed effects for the covariates sex, age in years, marital status, education, employment status, medication use, comorbidity with anxiety, and treatment duration in months. We only included as fixed factors those covariates that stepwise contributed significantly to a better model fit, according to the change in -2LL. Last, we checked each included covariate in interaction with the variable time, to understand their role in the symptom level change. In case that the interaction covariate-by-time was significant, we checked a three-way interaction between the covariate, time, and treatment. Non-significant covariate interactions were excluded from the final models. Across all models, we used a maximum likelihood (ML) method to estimate the parameters, which is recommended when using model fit estimates to determine the best model (Hox, Moerbeek, & Schoot van de, 2010). We used SPSS (version, 22.0) to perform the statistical analyses. Significance was evaluated at $p < .05$ (or $p < .01$ when variances were not equal). Effect sizes were calculated and presented using the pseudo-R^2 (Nakagawa & Schielzeth, 2013).

Results

Descriptive Statistics

Sociodemographic and clinical characteristics are shown in Table 1. Ethnic groups within treatments differed in treatment duration (in months), employment status and comorbid anxiety symptoms. When we compared treatments within ethnic groups, Turkish-Dutch received longer IPT treatment compared to CBT ($F = 7.29$, df= 1, 44; $p = .01$), and more native Dutch in the CBT (vs. IPT) treatment were in a relationship (X^2 (1, n = 213) = 9.52, $p = .002$, phi = -.21). We adjusted for the mentioned variables in the main analyses.

Table 1. Sociodemographic and Clinical Characteristics of the Study Sample

		Ethnicity							
		Native Dutch (n=246)		Turkish-Dutch (n=46)		Moroccan-Dutch (n=33)		Within-treatment, between ethnicities		
Continuous variable	Treatment	M (SD)		M (SD)		M (SD)		F	df	p	n_p^2
Age at intake	CBT	39.01 (12.47)		37.03 (10.04)		37.29 (10.47)		.46	2, 205	.63	.001
	IPT	40.03 (12.21)		34.59 (7.63)		39.33 (10.14)		1.60	2,114	.21	.03
Duration of care[c]	CBT	8.28 (5.16)		8.80 (6.61)		12.19 (7.97)		2.82[a]	2, 47.82	.07	.04
	IPT	9.01 (5.85)*		14.87 (8.52)*		10.97 (5.12)		5.31[a]	2,30.32	.01*	.10
GAF score	CBT	62.21 (8.10)*		58.5 (7.85)*		61.10 (7.64)					
	IPT	62.72 (9.70)*		58.24 (5.29)*		61.50 (9.24)					
Categorical variable		n	%	n	%	n	%	X^2	df	p	Cramer's V
Gender (female)	CBT	88	55.7	16	55.2	14	66.7	.94	2	.62	.07
	IPT	52	59.1	10	58.8	8	66.7	.26	2	.88	.05
Number of patients	CBT	158	76.0	29	13.9	21	10.1	.26	2	.99	.01
	IPT	88	75.2	17	14.5	12	10.3				
First generation immigrant	CBT	-	-	17	58.6	16	76.2	.98	1	.32	-.18[b]
	IPT	-	-	11	68.8	11	91.7	.99	1	.32	-.28[b]
Education level											
No- Low education	CBT	11	9.9	2	10.0	3	23.1	3.08	4	.55	.10
	IPT	3	5.3	1	8.3	1	14.3	3.47	4	.48	.15
Middle education	CBT	73	65.8	15	75.0	8	61.5				
	IPT	40	70.2	7	58.3	6	33.3				
Bachelor degree or higher	CBT	27	24.3	3	15.0	2	15.4				
	IPT	14	24.6	4	33.8	0	0				
Employment status (yes)	CBT	85	59.9	10	38.5	5	27.8	9.46	2	.009*	.23
	IPT	51	65.4	1	6.3	2	16.7	24.94	2	<.001*	.49
Marital status											
Unmarried/single/no relationship	CBT	49	31.6	11	40.7	9	42.9	1.68	2	.43	.09
	IPT	44	53.7	8	50.0	7	53.8	0.19	2	.91	.04
Cohabiting/ relationship	CBT	106	68.4	16	59.3	12	57.1				
	IPT	39	47.0	8	50.0	5	41.7				
Medication											
Antidepressant	CBT	62	44.0	12	48.0	4	22.2	4.7	4	.32	.11
	IPT	34	47.2	8	53.3	4	40.0	5.75	4	.22	.17
Other psychotropic drugs	CBT	11	7.8	1	4.0	3	16.7				
	IPT	2	2.8	1	6.7	2	20.0				
No psychotropic drugs	CBT	68	48.2	12	48.0	11	61.1				
	IPT	36	50.0	6	40.0	4	40.0				

Table 1. Continued

		Ethnicity								
		Native Dutch (n=246)		Turkish-Dutch (n=46)		Moroccan-Dutch (n=33)			Within-treatment, between ethnicities	
Comorbid anxiety symptoms (yes)	CBT	57	36.5	9	31.0	14	66.7	7.98	2	.02*	.20
	IPT	30	34.9	7	43.8	4	33.3	.50	2	.78	.07
Drop-out (yes)	CBT	22	14.7	4	14.8	2	10.5	.24	2	.89	.04
	IPT	5	6.0	5	33.3	5	41.7	17.03	2	<.001*	.39

Note. * Differing groups.[a] Brown-Forsythe for unequal variance.[b] Phi coefficient. [c] Total duration of care (from registration until closure) including IPT or CBT, but not necessarily consisting of this type of treatment only.

4

Differences in Treatment Effect of CBT and IPT between Ethnic Groups and Treatment Type

We included in our model a three-way interaction between ethnicity, treatment type, and time, a two-way interaction between time and treatment, and a two-way interaction between time and ethnicity to test our main hypotheses that the changes over time in depression severity, psychological distress and quality of life did not depend on treatment type or ethnicity, and that Turkish- and Moroccan-Dutch patients had higher psychopathology scores than natives did, disregarding treatment type. In Table 2, we show the results of the mixed linear regression models comparing Turkish-Dutch vs. native-Dutch patients, and Turkish- and Moroccan-Dutch *together* vs. native Dutch patients. In Table 3, we included the estimated marginal means and 95% confidence intervals of the non-adjusted models of the clinical outcomes.

Depression severity
Concerning the models contrasting Turkish-Dutch vs. native-Dutch[1] patients as well as Turkish- and Moroccan-Dutch together[2] vs. native Dutch patients, we found that the three-way interaction ethnicity-by-time-by-treatment was not significant, which indicated that the treatment effect (for CBT and IPT) did not differ across ethnicities. Additionally, we found that the two-way interactions time-by-treatment and time-by-ethnicity were not significant (therefore, not included in the final model). This indicated that the treatments did not differ in their change in depression severity over time and that ethnicities did not differ in their reduction in depression severity. Additionally, there were significant main effects of time (B = -7.28, 95% CI = [-8.58, -5.99][1]; B = -7.48, 95% CI = [-8.74, -6.23][2]), and ethnicity (B = 4.22, 95% CI = [2.01, 6.43][1]; B = 3.67, 95% CI = [1.89, 5.46][2]), for depression severity, indicating that participants showed decreased depression severity between the pre- and posttest, disregarding treatment group or ethnicity, and that Turkish-Dutch, and Turkish- and Moroccan-Dutch together showed overall higher depression severity than native Dutch did, disregarding treatment.

Table 2. Results of Non-adjusted and Adjusted Mixed Linear Regression Models Predicting Clinical Outcomes for Turkish- vs. native Dutch, and Turkish- and Moroccan-Dutch vs. native Dutch patients who received IPT or CBT

Clinical Outcome	Predictor	nD vs. TD				Predictor	nD vs. T/M			
		F	df	p	$Pseudo\text{-}R^2$		F	df	p	$Pseudo\text{-}R^2$
Depression severity	Non-adjusted model				19.34	Non-adjusted model				21.62
	Intercept	516.56	1,204.72	<.001		Intercept	738.14	1,217.54	<.001	
	Time	123.26	1,145.3	<.001		Time	137.94	1,156.34	<.001	
	Ethnicity	14.16	1,201.61	<.001		Ethnicity	16.41	1,213,53	<.001	
	Adjusted model [a]				40.22	**Adjusted model** [a]				55.45
	Intercept	75.46	1,92.77	<.001		Intercept	79.52	1,108.38	<.001	
	Time	48.48	1,82.76	<.001		Time	60.27	1,93.74	<.001	
	Ethnicity	18.29	1,95.20	<.001		Ethnicity	27.16	1,114.26	<.001	
	Time*medication	5.46	2,81.52	.006		Time*medication* treatment	3.09	8,130.42	.003	
						Employment	4.98	1,93.44	.03	
Psychological distress	Non-adjusted model				20.01	Non-adjusted model				26.49
	Intercept	969.77	1,299.44	<.001		Intercept	1379.35	1,339.57	<.001	
	Time	167.24	1,195.04	<.001		Time	177.88	1,212.66	<.001	
	Ethnicity	58.84	1,290.18	<.001		Ethnicity	79.71	1,320.61	<.001	
	Treatment	2.48	1,268.58	.12		Treatment	2.68	1,306.10	.10	
	Time*Treatment	4.44	1,196.33	.04		Time*Treatment	5.78	1,214.93	.02	
	Adjusted model [b]				43.19	**Adjusted model** [b]				46.53
	Intercept	317.34	1,167.13	<.001		Intercept	451.96	1,179.38	<.001	
	Time	131.17	1,110.19	<.001		Time	133.97	1,118.06	<.001	
	Ethnicity	40.00	1,151.48	<.001		Ethnicity	57.50	1,170.98	<.001	
	Treatment	3.25	1,140.47	.07		Treatment	3.72	162.35	.06	
	Time*Treatment	5.95	1,110.56	.02		Time*Treatment	5.65	119.09	.02	
	Education	4.14	2,145.72	.02		Education	4.42	2,157.10	.01	
	Employment	4.83	1,139.10	.03		Employment	6.43	1,156.15	.01	

Clinical Outcome	Predictor	nD vs. TD				Predictor	nD vs. T/M			
		F	df	p	Pseudo-R²		F	df	p	Pseudo-R²
Quality of life	Non-adjusted model				41.91	Non-adjusted model				36.77
	Intercept	455.95	1,183.80	<.001		Intercept	805.95	1,208.88	<.001	
	Time	50.96	1,161.22	<.001		Time	94.13	1,176.04	<.001	
	Ethnicity	19.26	1,183.80	<.001		Ethnicity	15.64	1,195.78	<.001	
	Time*Ethnicity	6.46	1,161.22	.01		Treatment	4.01	1,291.67	.05	
						Time*Ethnicity	5.94	1,176.16	.02	
	Adjusted model[b]				44.36	**Adjusted model**[b]				42.14
	Intercept	234.39	1,166.35	<.001		Intercept	342.29	1,164.53	<.001	
	Time	43.35	1,85.94	<.001		Time	68.46	1,91.77	<.001	
	Ethnicity	8.85	1,101.82	.004		Ethnicity	9.08	1,101.00	.003	
	Time*Ethnicity	2.80	1,85.90	.10		Treatment	6.33	1,150.44	.01	
	Covariates	n.s.				Time*Ethnicity	1.65	1,91.73	.20	
						Covariates	n.s.			

Note. Abbreviations; nD: native Dutch; TD: Turkish-Dutch; MD: Moroccan-Dutch; T/M: Turkish- and Moroccan-Dutch together.
[a] Model with covariates marital status, education, employment status, medication use and age. Only significant covariates are shown in the table.
[b] Model with covariates marital status, education, employment status and medication use. Only significant covariates are shown in the table.

Table 3. Estimated Marginal Means, and 95% Confidence Intervals of Depression Severity, Psychological Distress, Quality of Life and Client's Satisfaction across Measurement Points and Ethnic groups for IPT and CBT (non-adjusted models)

Treatment	Ethnicity	Depression severity[1] (0-27)		Psychological distress[2] (0-52)		Quality of life[3] (0-10)		Client's satisfaction[4] (16-40)
		Pre	Post	Pre	Post	Pre	Post	Post
		M [95% CI]	M [95% CI]	M [95% CI]	M [95% CI]	M [95% CI]	M [95% CI]	M [95% CI]
CBT	Native Dutch	14.65 [13.83,15.47]	7.37 [6.25,8.48]	18.66 [17.52, 19.81]	11.06 [9.61, 12.52]	3.02 [2.82, 3.22]	6.32 [5.92, 6.72]	29.63 [27.99, 31.28]
	Turkish-Dutch	18.86 [16.75, 20.98]	11.58 [9.27, 13.89]	27.37 [25.17, 29.57]	19.77 [17.33, 22.20]	2.29 [1.81, 2.78]	3.86 [2.64, 5.09]	29.87 [23.00, 36.00]
	Moroccan-Dutch	16.29 (2.61)[a]	9.33 (2.03)	24.89 (1.69)	19.83 (3.35)	3.18 (0.51)	4.79 (0.62)	26.13 [19.78, 32.33]
	Native Dutch	14.71 [13.90,15.52]	7.23 [6.14,8.32]	18.60 [17.48, 19.73]	11.15 [9.73, 12.57]	2.90 [2.66, 3.14]	6.20 [5.78, 6,61]	29.63 [27.89, 31.36]
	Non-native Dutch	18.38 [16.71, 20.06]	10.90 [9.01, 12.79]	26.76 [25.03, 28.49]	19.31 [17.32, 21.30]	2.43 [2.03, 2.82]	4.40 [3.46, 5.34]	28.00 [23.11, 32.07]
IPT	Native Dutch	14.65 [13.83,15.47]	7.37 [6.25,8.48]	18.81 [17.27, 20.35]	8.26 [6.30, 10.22]	3.02 [2.82, 3.22]	6.32 [5.92, 6.72]	31.28 [29.91, 32.63]
	Turkish-Dutch	18.86 [16.75, 20.98]	11.58 [9.27, 13.89]	27.52 [25.10, 29.93]	16.96 [14.16, 19.76]	2.29 [1.81, 2.78]	3.86 [2.64, 5.09]	28.80 [20.60, 36.00]
	Moroccan-Dutch	18.25 (2.59)[a]	n.a.	25.40 (3.09)	n.a.	3.47 (0.59)	n.a.	30.00 [26.00, 35.00]
	Native Dutch	14.65 [13.83,15.47]	7.37 [6.25,8.48]	18.81 [17.27, 20.35]	8.18 [6.23, 10.12]	3.26 [2.95, 3.57]	6.56 [6.10, 7.01]	31.28 [29.75, 32.00]
	Non-native Dutch	18.38 [16.71, 20.06]	10.90 [9.01, 12.79]	27.05 [25.07, 29.03]	16.33 [13.86, 18.80]	2.78 [2.35, 3.23]	4.76 [3.79, 5.73]	29.25 [24.75, 33.57]

Note. CI = 95% confidence interval; n.a. = not available.

[a] We present the M (SD) of Moroccan-Dutch patients in the study sample.

[1] Dutch population normative scores QIDS-SR: 0-5 nondepressed, 6-11 mildly dysphoric, 10-15 moderately dysphoric, 16-20 severely dysphoric, 21-27 extremely severely dysphoric.

[2] Dutch population normative scores 4Ks Psychological distress: 0-7 very low, 8-11 low, 12-15 below average, 16-18 average, 19-22 above average, 23-28 high, 28-52 very high.

[3] Dutch population normative scores 4Ks Quality of life: 0-2.24 low, 2.25-2.99 below average, 3.00-3.99 average, 4.00-5.4 above average, 5.5- 10 high.

[4] Dutch population normative scores 4Ks Client satisfaction: 0-28 low, 29-31 below average, 32-33 average, 34-36 above average, 37-40 high.

Psychological distress

For both models contrasting Turkish-Dutch vs. native-Dutch[1] patients, and Turkish- and Moroccan-Dutch together[2] vs. native Dutch patients, analyses revealed that the three-way interaction ethnicity-by-time-by-treatment was not significant, indicating that ethnicities did not differ in the treatment effect achieved in both CBT and IPT for psychological distress. We found a significant two-way interaction time-by-treatment (*B* CBT= -7.60, 95% CI = [-9.23, -5.98][1], *B* IPT= -10.55, 95% CI = [-12.79, -8.31][1]; *B* CBT= -7.45, 95% CI = [-8.99, -5.91][2], *B* IPT= -10.72, 95% CI = [-12.91, -8.53][2]), which meant that IPT patients (disregarding ethnicity) showed lower psychological distress at posttest than CBT patients did. The two-way interaction time-by-ethnicity was not significant, showing that ethnic groups did not differ in their improvement in psychological distress. Furthermore, we found a significant main effect for ethnicity (*B* = 8.71, 95% CI = [6.47, 10.94][1]; *B* = 8.15, 95% CI = [6.36, 9.95][2]), which indicated that Turkish-Dutch, and Turkish-, and Moroccan-Dutch together reported overall higher psychological distress compared to native Dutch, disregarding treatment.

Quality of life

In both models comparing Turkish-Dutch[1] vs. native-Dutch patients, and Turkish- and Moroccan-Dutch together[2] vs. native Dutch patients, non-significant ethnicity-by-time-by-treatment interactions showed that the ethnicities did not differ in the treatment effect of CBT or IPT for quality of life. We also found a non-significant two-way interaction time-by-treatment, indicating that the treatments did not differ in their change in quality of life over time. There was a significant two-way interaction time-by-ethnicity (*B* Turkish-Dutch = 1.57, 95% CI = [.29, 2.84][1], *B* native Dutch = 3.30, 95% CI = [2.88, 3.72][1]; *B* Turkish-, Moroccan-Dutch = 1.97, 95% CI = [.99, 2.96][2], *B* native Dutch = 3.30, 95% CI = [2.87, 3.73][2]). Turkish-Dutch and Turkish and Moroccan patients together reported lower quality of life at posttest than native Dutch did. The non-adjusted models explained a large portion of the variance (41.9% for the model including only Turkish-Dutch patients; and 36.8% for the model including Turkish- and Moroccan-Dutch patients).

Exploratory analyses of covariates

Exploratory analyses showed that there was a significant two- way interaction time-by-medication for depression severity for the comparison between Turkish-Dutch and native Dutch patients. Post-hoc analyses indicated that patients using antidepressants (M [95% CI] = 8.25 [5.82, 10.67]) showed a larger reduction of depression severity at posttest compared to patients using other psychotropic drugs (M [95% CI] = 10.69 [5.27, 16.11]), or no medication (M [95% CI] = 11.51 [9.19, 13.82]), disregarding treatment or ethnicity. In the model including Turkish- and Moroccan-Dutch as one group, the three-way interaction time-by-medication-by-treatment was significant. Post-hoc analyses showed that scores for depression severity did not change significantly over time for IPT patients using psychotropic drugs other than antidepressants (Mchange over time [95% CI] = -5.86 [-15.17, 3.45]), whereas the scores did improve for CBT patients in the same medication category (Mchange over time [95% CI] = -9.91 [-15.69, -4.13]).

Additionally, unemployment (B = 1.67, 95% CI = [0.18, 3.16]) was related to overall higher scores on depression severity. We also found covariates that were related to higher levels of psychological distress at both pre- and posttest were lower education level (middle vs. high education; B = 3.10, 95% [0.39, 5.81), and unemployment (B = 2.33, 95% [0.52, 4.15]). See Table 2 for detailed information on the adjusted models.

Adding covariates to the models contributed greatly to the explained variance of depression severity and psychological distress in particular (increase in pseudo- R^2 ranged from 20.4 to 33.8%). Including covariates in the models explaining quality of life did not lead to a much larger explained variance; however, the interaction ethnicity-by-time for quality of life became non-significant.

Differences in Client Satisfaction between Ethnic Groups and Treatment Type

We compared client satisfaction of native, Turkish-, and Moroccan-Dutch patients after CBT and IPT. There was no significant interaction effect between ethnicity and treatment type (F (1, 143) = .36, p = .70, n_p^2 = .005). All ethnicities showed similar client satisfaction in both treatments. This was also the case with Turkish- and Moroccan Dutch as one group (F (1, 143) = .02, p = .90, n_p^2 < .001). There were also no main effects for ethnicity or treatment. Instrument's norms showed that all groups' satisfaction ranged low-below average.

Differences in Treatment Dropout between Ethnic Groups and Treatment Type

The dropout figures are shown in Table 1. Native, Turkish-, and Moroccan-Dutch patients in the CBT group did not differ significantly in proportion of treatment dropout (χ^2 (2) = 0.24, p = 0.89), whereas Native, Turkish-, and Moroccan-Dutch patients in the IPT group showed significant differences with a medium effect size (χ^2 (2) = 17.03, p<.001, Cramer's V = .34). When further examining treatment dropout with a logistic regression model, there was a significant ethnicity by treatment type interaction. Turkish- and Moroccan- patients in the IPT group, compared to their native counterparts and to patients in the CBT group, were more likely to drop out of treatment (OR = 7.71, p =.03, 95% CI [1.25; 47.44] and OR = 16.28, p =.01, 95% CI [1.96, 135.35]. Given the small sample size, we explored the possible role of covariates with bilateral Pearson correlations. In the CBT group, lower GAF score was significantly related to dropout (r = -.18, p = .05). In the IPT group, being non-Dutch (r = .39, p = .01), younger age (r = -.22, p = .05), lower GAF score (r = -.24, p = .05), and higher baseline psychological distress (r = .32, p < .01) were significantly related to dropout. Other tested covariates were sex, employment, anxiety symptoms, treatment duration, education, baseline depression severity and baseline quality of life.

Discussion

Despite compelling arguments advocating effectiveness of CBT and IPT, questions regarding (similar) effectiveness for ethnically diverse populations in naturalistic settings are less often addressed (Barth et al., 2013; Jakobsen et al., 2012). In this study, we examined, for native, Turkish- and Moroccan-Dutch patients, the effectiveness of CBT and IPT in reducing depression severity and psychological distress, and improving quality of life. We also examined whether ethnic groups and/or treatments differed in the reported client's satisfaction with the received treatment and their treatment dropout.

Consistent with earlier research, and with our hypothesis, we found that CBT and IPT were equally related to the reduction of depression severity. Disregarding the type of treatment, native, Turkish-Dutch, and Turkish- and Moroccan-Dutch, examined as one group, improved over time. However, native Dutch were closest to reach the cut-off score (≤5) at posttest that defines remission on the depression measure (QIDS-SR). Against our hypothesis, equal effectiveness of CBT and IPT was not the case for psychological distress in this study sample. Disregarding ethnicity, IPT patients showed lower psychological distress after treatment than CBT patients did, which we believe might be partly related to the also broader, more integrative and trans-diagnostic character of IPT (Lipsitz & Markowitz, 2013). However, this finding also appeared related to the higher dropout rates of non-native patients, and the association found between higher psychological distress at baseline and higher dropout in the IPT group. Thus, IPT was associated with a greater reduction in psychological distress compared to CBT, only for those (mostly native) patients that stayed in treatment, with lower psychological distress at baseline.

The finding that Turkish- and Moroccan patients receiving IPT were more likely to drop out of treatment than native patients and their counterparts receiving CBT did was also against our expectations. There is some evidence that cognitive therapy works better than IPT does with patients with more paranoid symptoms and somatic complaints (Bernecker et al., 2017; Huibers et al., 2015). Also, comorbid anxiety symptoms have been associated with smaller depression change in IPT (at posttreatment, but not at follow-up; van Bronswijk, Lemmens, Huibers, Arntz, & Peeters, 2018). Although none of these findings were examined in relation to the ethnicity of the participants, it is probable that in the current study, non-native patients, with higher baseline psychological distress compared to natives, could not find fast solace for their varied complaints in IPT, which they may have achieved, having had stayed in treatment.

Outcomes for quality of life were not related to treatment type. Ethnicity, on the other hand, played an important role. Turkish-Dutch, and Turkish- and Moroccan-Dutch patients together, reported lower quality of life than native Dutch did at posttest after both CBT and IPT. Explaining quality of life, covariate variables cancelled the interaction effect between ethnicity and treatment, indicating that the posttest difference seen in the non-adjusted model may be related to a generally lower quality of life of Turkish-Dutch, and Turkish- and Moroccan-Dutch patients, where ethnicity possibly interacts with other aspects of diversity (e.g., employment, education, marital status and medication), though none of them appeared significant on their own.

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The findings regarding quality of life stressed the impact of intersectionality of diversity factors on clinical variables (Fassaert, Hesselink, et al., 2009; Raleigh et al., 2007), and suggest that both CBT and IPT need to encompass interventions adapted to diversity characteristics of their target groups to reach satisfactory outcomes in quality of life, especially for the ethnic minority groups.

Furthermore, studies show that both Turkish and Moroccan immigrant groups face considerable societal hardship, such as discrimination and low socioeconomic status (Aichberger et al., 2015; van Dijk et al., 2011). Moroccan-Dutch groups, for instance, show the highest discrimination perception as a group, and the strongest association with depressive symptoms (van Dijk et al., 2011). Turkish immigrants in Europe also hold a particularly disadvantaged position in education and in opportunities in the labor market (Heath, Rothon, & Kilpi, 2008). The chronic nature of these phenomena might be the reason that aspects of diversity, such as unemployment and lower education, explained part of the variance of the overall levels of depression severity and psychological distress, but did not explain any portion of the change in symptoms over time. However, due to sample size constrictions, we did not test interaction effects between diversity characteristics and ethnicity, which means that in the examined model, unemployment and lower education explained higher psychopathology in the native group too. This is concordant with the general negative association found between social adversity and mental well-being (WHO & Calouste Gulbenkian Foundation; 2014).

Besides treatment (and disregarding ethnicity), the use of antidepressants appeared especially relevant for the reduction of depression severity (vs. other psychotropic medication, and no medication), which agrees with current widespread clinical guidelines to treat mild to severe depression (e.g., Trimbos-instituut, 2013). Furthermore, we found that CBT, compared to IPT, was more effective for patients using a psychotropic medication other than antidepressants. The use of different types of psychotropic drugs might be a proximal indicator of more severe depression, for which IPT has earlier been found to be less effective than CBT (Luty et al., 2007). However, the findings regarding the effectivity of IPT and CBT related to depression severity have been inconclusive (Bernecker et al., 2017), and in this study, the wide confidence intervals indicated inaccuracy, possibly due to few patients receiving IPT and using another psychotropic medication besides antidepressant in our sample.

In this study, as we hypothesized, Turkish- and Moroccan-Dutch patients showed higher depression severity, psychological distress, and lower quality of life at pre- and posttest than native Dutch patients did. These findings are in line with earlier findings showing that immigrant patients, especially Turkish-Dutch, tend to report higher symptom levels compared to native populations (Blom et al., 2010; Levecque et al., 2007; Schrier et al., 2010); and also with results showing that (higher) symptom level at start predicts (higher) symptom level 6 months later (Nap et al., 2015). However, it's still unknown what this tendency reflects. Among the possible answers is the earlier mentioned social hardship interacting with ethnicity, but the tendency could also reflect response-bias, higher symptom- or dysfunctionality severity, cultural differences in experience and/or expression of mental distress, or instruments' cultural validity

issues, which are based on western cultural values, and lack specific norms for ethnic minorities (Tang et al., 2016).

We did not find any difference in client satisfaction between treatment types between native, Turkish- and Moroccan-Dutch. Unexpectedly, all three groups reported below average satisfaction with the treatment, indicating that efforts to study and improve client satisfaction among all ethnicities are needed. Future studies should further examine the reason for dissatisfaction, assessing treatment-specific aspects and therapeutic alliance. The latter has been found to contribute to treatment outcomes of IPT and CBT (Carter et al., 2015).

The current findings are preliminary and should be interpreted with caution due to the limitations of our study. First, this study relied on a case-control retrospective design, which hindered a treatment integrity check. Second, we could only include information of patients willing or being language proficient enough to fill in the ROM, which might limit the generalizability of results and bias them towards more motivated or well-integrated patients. Third, due to the institution's data storage procedures, we were not able to neither assess nor control for other possibly relevant variables, such as therapists' characteristics, number of sessions, moment of dropout and therapeutic trajectory including other therapies alongside CBT or IPT, if this was the case. Another important limitation was the small sample of ethnic minority patients, especially those receiving IPT at posttest, which hampered analyzing therapist effects and including the Moroccan-Dutch group separately in the models. Linear mixed modeling allowed us to make fair estimations, despite the missing values; and we examined both groups together to increase the sample size, finding many consistent results. The modest sample also confronted us with structural difficulties in conducting research with ethnic minorities (Lau, Chang, & Okazaki, 2010). To illustrate, 32.4% of the total, available case files did not contain information on nationality, ethnicity, socioeconomic or ROM information, which resulted in exclusion if the manual examination was unsuccessful. It also became apparent that Turkish- and Moroccan-Dutch patients more often received pharmacotherapy (see Figure 1), with Moroccan-Dutch patients proportionally less often receiving CBT or IPT than native or Turkish-Dutch patients did, which limits the generalizability of the conclusions to the whole Turkish- and Moroccan-Dutch population.

Notwithstanding these limitations, given the scarce literature and cross-cultural studies on treatment effectiveness, the findings lay the ground for further research and might be informative for mental health professionals. A strength of our study was its ecological validity due to the use of naturalistic data collected from a large mental health institution. The manual completion of missing values of the automatically generated dataset also allowed us to include more ethnic minority participants and to explore the effects of other clinical factors, such as medication use or comorbid anxiety, and other diversity factors besides ethnicity on the effectiveness of CBT and IPT. We also assessed the quality of life besides symptom change and treatment dropout, adding to the still scarce literature testing ethnicity as a moderator of dropout. Future research should ensure a sufficiently large sample of ethnic minority patients, examine the influence of therapists and the interactions or moderating effect of ethnicity-by-sociodemographic and

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clinical baseline characteristics. Furthermore, studies are needed on functional outcomes after depression treatment (Lam, Parikh, Michalak, Dewa, & Kennedy, 2015) that also take ethnic background into account.

Conclusion

The results of the current pilot study showed that CBT and IPT can be effective for reducing depression severity among native and ethnic minority-Dutch. However, though IPT showed a greater effectiveness in reducing psychological distress than CBT did, this applied for people who did not drop out of treatment, with lower baseline psychological distress. Also, non-native patients were more likely to drop out of IPT. Furthermore, Turkish- and Moroccan-Dutch patients showed overall higher depression severity, psychological distress, and less favorable outcomes for quality of life, disregarding treatment type. Concerns regarding the influence of intersectionality (moderators of effectiveness), cross-cultural validity and generalizability of the results warrant further research.

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Development and evaluation of diversity-oriented competence training for the treatment of depressive disorders

Abstract

Studies in Europe indicate that some ethnic minorities have higher rates of mental disorders and less favorable treatment outcomes than their counterparts from majority groups. To date, efforts regarding training to reduce disparities have mainly focused on ethnocultural competences of therapists, with less attention paid to other aspects of diversity, such as sex/gender and socioeconomic status. In this study, we aim to determine the effectiveness of a population-specific, diversity-oriented competence training designed to increase therapist competence to integrate aspects of diversity features in clinical assessment, diagnosis, and treatment of depressive disorders in Turkish- and Moroccan-Dutch patients. A group of 40 therapists were location-based assigned to either training or a control condition (no training). Self-reported diversity competence, a knowledge test, and therapists' satisfaction with training were used to monitor the training and to measure competence levels at baseline, post-training, and three-month follow-up. Attitude-awareness and knowledge components of the self-reported diversity competence and test-measured knowledge increased in the training condition. Most gains remained stable at follow-up except test-measured knowledge after controlling for percentage of ethnic minority patients in caseload. There were no changes regarding therapists' self-reported skills. Therapists expressed medium–high satisfaction with the training, acknowledging the relevance of diversity competence for their daily practice.

Introduction

Recent cross-national research in Europe has drawn attention to the struggle of mental health care professionals (herein referred as therapists) to deliver high quality services to immigrant populations (Priebe et al., 2011). One-size-all approaches, language barriers, socioeconomic constraints, ethnocultural differences, different illness beliefs and staff's lack of awareness and experience have been commonly reported difficulties (Lindert et al., 2008; Priebe et al., 2011; Sandhu et al., 2013). At the same time, various studies have documented that some groups of ethnic minorities are more at risk that their counterparts from majority groups for developing mental disorders such as depression (Lindert et al., 2008; Missinne & Bracke, 2012).

In the Netherlands, the case of Turkish-Dutch and Moroccan-Dutch minorities has drawn the attention of researchers and societal organizations in recent years, as society considers more carefully the implications of mental health conditions and social problems experienced by these groups. Surveys have reported the 1-month prevalence of depressive disorders as 14.9%–16.5% of Turkish-Dutch and 5.8%–6.6% of Moroccan-Dutch, compared to 1.1%–4.1% of native Dutch (de Wit et al., 2008; Schrier et al., 2010) with the highest prevalence among elderly minority group members (van der Wurff et al., 2004). At the same time, both levels of psychological distress and use of mental health care among these groups has been associated with their degree of acculturation, especially Dutch language proficiency, gender, and income level (Fassaert et al., 2011; Fassaert, de Wit, Tuinebreijer, Verhoeff, et al., 2009; Fassaert, Hesselink, et al., 2009). Hence, the experience of depression among these two groups may be determined by other aspects of diversity than just their ethnicity and regional background.

To address this diversity, training programs need to address the multidimensionality and intersectionality of diversity without disregarding the importance that ethnic and regional background may have for many patients, therapists, and Dutch institutions, especially while considering that labor migration is (for many) a part of their history. In this paper, we present the design and evaluation of a diversity-oriented competence training program aimed at the treatment for depression in two specific ethnic minority groups, namely Turkish- and Moroccan-Dutch patients.

Culture, Diversity, and Intersectionality in Mental Health Care

In recent decades, most efforts made to alleviate barriers and reduce inequity in mental health care have focused on the inclusion and strengthening of cultural competence. As a consequence, policies in North America and Europe currently require that therapists acquire cultural competence as part of their professional skills (APA; 2003; WHO; 2010). Initially, cultural competence in the USA was based on a narrow definition of culture that referred to ethnocultural aspects (language, geographic origin, ethnicity, and race) as rather fixed and homogenous characteristics (Kirmayer, 2012). Current approaches consider culture as a complex, dynamic concept constructed by ongoing processes within and between ethnocultural communities, in relation to broader political and social contexts (Gregg & Saha, 2006; Kirmayer, 2012; Marsella

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& Yamada, 2000; Yamada & Brekke, 2008). While this approach represents progress towards more equity in mental health care, voices have been raised in favor of a more diversity-oriented approach that does justice to the increasingly diverse demographics of populations worldwide, which has been referred to as ''hyperdiversity'' by some authors (Betancourt, 2006; Campinha-Bacote, 2003; Celik et al., 2012; Dogra & Karim, 2005; Good & Hannah, 2015; Hannah, 2011; Hays, 2008; Sears, 2012; Van Mens-Verhulst & Radtke, 2006; Wear, 2003). In our current work, we depart from the definition of diversity that refers to 'markers of difference that: a) are relevant to an individual's societal position and b) that due to biological or social anchoring are relatively immutable, such as age, gender/sex, ethnicity, sexual orientation , socioeconomic status, (dis-) ability and spirituality' (Van Mens-Verhulst, 2003, p. 26).

Among diversity-oriented frameworks of health care, the intersectionality model (Collins, 1990; Crenshaw, 1989; McCall, 2005; Van Mens-Verhulst & Radtke, 2011), that originally stemmed from gender studies is a recent development in the study of ethnic disparities in mental health care (Sears, 2012). Intersectionality acknowledges that aspects of diversity are not simply cumulative, but also determine, in dynamic, mutual interactions, the position that a person occupies in society, and as such also shapes their experiences of exclusion, inclusion, power or disadvantage (Knudsen, 2006; Wear, 2003). Intertwined diversity features also create different value systems and illness explanatory models (Sears, 2012; Van Mens-Verhulst & Radtke, 2011).

The intersectionality paradigm shows its relevance in mental health care in studies that examine, for instance, the threefold risk for illness among individuals of certain race, social class, and gender: thus, black women were found to express a stronger sense of self and lower rates of depressive symptoms than white women, but only when they held higher socioeconomic positions (Rosenfield, 2012). In such case, exclusive attention to any single aspect of diversity (e.g., race) would lead to inadequate appraisal of the individual and social context in which depression may arise, which might jeopardize the effectiveness of the treatment for depression.

Development and Content of Diversity-Oriented Competence Training

The diversity-oriented competence training we propose promotes the development of what we call "diversity competence" (Bekker & Frederiksen, 2005; Van Mens-Verhulst & Bekker, 2005). With diversity competence, we refer to a knowledge, attitude, and skill set that allows therapists to use the intersectionality paradigm to look at themselves, their patients and their interactions. In doing so, therapists are aware that patients' individual needs importantly stem from their various, interacting aspects of diversity (Bechtel & Ness, 2010). Similarly, therapists are also aware of their own aspects of diversity and how these characteristics may influence their therapeutic contacts (Celik et al., 2012; Kumas-Tan, Beagan, Loppie, MacLeod, & Frank, 2007; Wear, 2003). In addition, therapists are able to integrate population-specific insights in their interventions at the same time that they are conscious of the influence of salient diversity features (e.g., individual differences among members of the same population) and contextual factors (Van Mens-Verhulst, 2003).

In cooperation with Palet, a Dutch diversity knowledge platform, we developed a theoretical and practical training aimed at improving therapists' diversity competence, with a particular focus on its applicability in clinical practice with Turkish- and Moroccan-Dutch patients with depression. The focus on this specific population was determined by the societal urgency to address the gap between high prevalence rates of depression found in these minority groups and the negative treatment experiences reported, among which, attrition and lower care uptake are salient problems (Blom et al., 2010; van de Beek et al., 2017).

Turkish- and Moroccan-Dutch groups in the Netherlands share a history of labor-migration, and later family reunification, which started in the late 1950s in search of better economic prospects. In our training, we take this particular group history seriously and carefully discuss the implications that patients' diversity in terms of race, ethnicity, and regional backgrounds may hold for their illness models and symptomatic manifestations of depression, mental health status, and therapeutic transactions (Hwang, Myers, Abe-Kim, & Ting, 2008; Kirmayer, Groleau, Looper, & Dao, 2004; Rahiem & Hamid, 2012) . Models of cultural competence and cultural frameworks, such as D. W. Sue and colleagues' (1982) tripartite model of competence, Arredondo and colleagues' (1996) behavioral operationalization of cultural competence and Berry's (1992) model of acculturation were integrated in the training to explore the impact that migration and living in a (relatively) alien environment can have in the experience of depression (Bhugra & Ayonrinde, 2004). We integrated the population-specific component of the training with knowledge and good practices in the assessment, diagnosis and treatment for depression of Turkish and Moroccan patients based on a review of published international and national studies and clinical guidelines (Sempértegui et al., 2019; Sempértegui, Knipscheer, et al., In preparation). Given that studies addressing intersectionality or aspects of diversity related to depression among Turkish and Moroccan patients are still relatively scarce, the training primarily focused on ethnocultural background in relation to sex/gender, religion, and socioeconomic status. Whenever possible, we included information on other aspects of diversity such as age or sexual orientation in relation to the experience and treatment for depression.

We placed the intersectionality model as the basic underlying framework and principal analytical tool for therapists to reflect on their own diversity identity, the influence of their aspects of diversity on the interactions with their patients (e.g., I am a young, South-American-Dutch, non-practicing catholic, highly educated, female therapist treating a middle-aged, first-generation, Turkish-Dutch, practicing Muslim, unemployed, male patient), and the population-specific insights that were presented during the training. This model depicts individuals as complex entities with many identities and self-defining dimensions (Arredondo & Glauner, 1992) highlighting the sometimes predominant influence of factors such as poverty, insurance status or a bureaucratic health system determining mental health care (Yamada & Brekke, 2008).

The intersectionality perspective and population-specific insights were integrated in all the training modules. For instance, therapists were introduced to the diversity-sensitive interview (Bekker & Frederiksen, 2005) in order to learn how to pay attention to ethnocultural aspects such as migration history, generation, and biculturalism, while taking into account other aspects

of diversity that might be more relevant for the health status of their Turkish- or Moroccan-Dutch patients with depression. Population-specific phenomena and determinants of depression were also presented and discussed in light of the intersectionality paradigm, paying attention to the influence of such phenomena on the diagnosis or treatment of depression. An example of such phenomena is the "temporary mentality"—that is, the idea among Turkish-Dutch that their stay in the Netherlands is only temporary and alienating. In the discussion, it was important to nuance the influence of ethnicity and make clear that findings concern especially first-generation, unemployed, females of Turkish origin with depressive symptoms (Can, 2010). Therapists could thus appreciate the added value of this nuance, which counterbalances the emphasis on ethnic and regional background and stresses other important aspects of diversity such as socioeconomic stressors particularly relevant for female group members. This nuance also points to other treatment strategies, such as case-management by social workers to alleviate economic stressors and efforts to expand the patient's social network of women in particular. In this sense, intersectional analyses help focus on what is most important at a given point in time, and on opportunities for improving the social situation of an individual, taking the separate aspects of diversity as well as the product of their interactions into account. In the training condition of our study, some therapists referred to the intersectionality framework as an "eye-opener".

A recent review showed that there are few program evaluations that incorporate both diversity-oriented (patient-centered) and ethnocultural-related components to improve health care for ethnic minority patients (Renzaho et al., 2013). Most training programs described in the review showed positive outcomes regarding providers' awareness and ethnocultural understanding. However, most studies were limited to medical staff and students in Canada or the USA. Only one considered the competencies of therapists and only two were performed in Europe (UK; Renzaho et al., 2013). In addition, none of the trainings placed the intersectional paradigm on the basis of their models or addressed a specific ethnic group or clinical disorder. The limitations outlined in this review highlight the potential benefit of a population-specific approach to diversity-oriented competence training. These benefits require further study, particularly in mental health care settings in Europe, and with a greater focus on the intersectional influences of different aspects of diversity.

Aim of the Study

With this study, we aimed to evaluate the effectiveness of a diversity-oriented competence training aimed at treatment of depression for Turkish- and Moroccan-Dutch patients. Our main research question was whether such training leads to increased diversity competence among therapists when compared to control therapists who did not receive the training. To evaluate the results, we used an objective measure of knowledge (knowledge test), in addition to measures of self-reported diversity competence. We assessed participant competence levels (including knowledge) at baseline, post-training, and three-month follow-up. We expected that participation in the training would be associated with higher levels of self-reported attitudes,

skills and knowledge, and better mastery of actual knowledge about the specific populations. We also expected that improvement in scores would be retained at three-month follow-up evaluation. Finally, as an integrative aspect of training evaluation, we also assessed the participants' satisfaction with the training, which we expected to be positive.

Method

Participants

Participants were 40 therapists (diverse mental health care professionals, including psychologists, psychiatrists, psychotherapists, psychiatric social workers) of four Dutch outpatient psychiatric institutions located in the provinces of South Holland and North Brabant. The group that received the training consisted of two male and 18 female therapists, of which one was excluded from the main analyses due to lack of information on most variables. Their mean age was 43.11 (SD = 10.03); all reported being heterosexual, most were married or cohabitated (77.8%) and several had children (58.8%). Five of the professionals (27.8%) reported being non-native Dutch, four were first-generation immigrants, and one second-generation. The control group consisted of one male and 19 female therapists. Their mean age was 35.75 (SD = 12.88); all reported being heterosexual, most cohabitated or were married (80.0%) and approximately one third had children (35.0%). In this group, eight professionals (35.0%) reported being non-native Dutch, three were first-generation and five second-generation immigrants. There were no baseline differences in sociodemographic characteristics or acculturation between both groups (see Table 1).

Research Design and Procedure

Our study was a quasi-experimental, multi-center study with a pre-, posttest design. Participants were recruited between November 2010 and February 2012. To this end, we approached several teams of Dutch mental health care institutions, and assigned the four teams that were willing to participate randomly (with the SPSS random number generator) to either the training or the control condition. Controls did not receive any training (care as usual). Randomization was done at team (rather than individual) level to avoid trained therapists transmitting competencies gained during the training to untrained control therapists within the same institution. Participants in the training condition (n = 20) were trained in December 2010 and February 2011. Data collection among controls (n = 20) started in March 2011 and February 2012. From one team with 16 potential participants, the institution allowed only eight to participate in the study; these eight participants were selected randomly from the 16. Participants of both the training and control condition were asked to fill out the pre-training survey one week before the training or after agreeing on participation (T1). After the training, or two weeks after the first measurement (control condition), participants filled out the post-training survey (T2), which they handed back two to four weeks after the training. Participants of both conditions received a three-month

follow-up survey through email (T3), which they could fill out either electronically or with pen and paper. Additionally, trainees filled out evaluation questionnaires immediately after each of the four training modules. The training comprised a set of evidence-based knowledge, guidelines, and skills to be taught in four modules of 4 hours over two days. The didactic methods included theoretical lectures, practical and imaginary exercises, role-plays, case evaluations, plenary discussions, and homework (see Appendix A for an overview of the training). A reader with relevant articles and instruments was composed for the participants, which they were asked to read before the training. Instructors included the third author of this paper (certified psychologist, university professor in clinical psychology and supervisor of the current research) and three other experts in the field of diversity and mental health care (a cultural anthropologist-sociologist, a certified psychologist and a diversity advisor). Sections of the training were first field-tested and then refined with the comments of 19 therapists who voluntarily took this training as an elective course in their education program to become a registered psychologist in the Netherlands.

The research protocol was approved by the Dutch Medical Ethical Commission for Mental Health care institutions (METIGG) prior to the start of the study. The moment a team decided to participate in the study, permission was given to the researchers to anonymously use all collected information for the study purposes.

Measures

Measurement at T1 included a sociodemographic questionnaire, a measure of the acculturation level, a self-report evaluation survey on attitudes, skills and knowledge, and a knowledge test about the specific target populations. Both T2 and T3 measurement included the self-report evaluation survey and, again, the knowledge test. All questionnaires were in Dutch.

Sociodemographic questionnaire. Demographics included participants' gender, age, highest education degree, mental health care profession, current function and years in that function, percentage ethnic minority patients in their caseload, and experience and training working with interpreters. They were also asked whether they had attended education programs related to diversity or cultural competence (training, workshop, clinical supervision), and if positive, the content and duration of the program. Participants were asked about aspects of diversity, such as their ethnic and regional background, family composition (marital status, number of children), sexual orientation, religious background, parents' ethnicity, and daily language used at home, at work, and with friends.

Diversity competence. No instrument that assesses population-specific diversity competence was available at the time of the study. The most well-known instruments assessing therapists' competencies (e.g., Cross-Cultural Counseling Inventory-Revised (CCCI-R); LaFromboise, Coleman, & Hernandez, 1991; Multicultural Counseling Inventory (MCI); Sodowsky, Taffe, Gutkin, & Wise, 1994) do not distinguish between clinical groups, and focus mostly on the ethnicity-related social position of the patient (Kumas-Tan et al., 2007). To assess population-specific diversity competence, the Attitude-Awareness, Skills and Knowledge scale (AaSK; Stupar,

Sempértegui, & Bekker, 2010a) was developed. This self-report instrument assessed specific competences related to the therapeutic contact with particularly Turkish and Moroccan ethnic patients. The AaSK contains 21 items divided into three subscales of seven items, each scored at a 5-point scale ranging from 1 "totally disagree" to 5 "totally agree". The attitude-awareness subscale assesses participants' appraisal of their diversity-oriented therapeutic attitude (e.g., "I am aware of my own diversity identity and its influence on my professional practice", "During therapy, I am curious about the life story of my patients of Turkish or Moroccan ethnic background". The skills subscale assesses the self-reported ability of the professional for working, for instance, with traditional healers, interpreters and diversity-oriented intake interviews (e.g., "I am able to use a diagnostic questionnaire with the assistance of an interpreter", "I can recognize when ethnic and cultural factors influence the therapeutic relationship"). The knowledge subscale assesses participants' evaluation of their knowledge about diversity in mental health care, especially about good practices in the therapeutic process with Turkish and Moroccan patients with depressive symptoms (e.g., "I possess knowledge about (ethnic) diversity in mental health care", "I possess satisfying knowledge about the prevalence and manifestation of depressive symptoms among Turkish- and Moroccan-Dutch patients").

Diversity and population-specific knowledge. We could not identify a measure of prior knowledge on diversity factors and ethnocultural characteristics relevant for the assessment and treatment of depressive disorders in Turkish-Dutch and Moroccan-Dutch people. Therefore, the Diversity Competence Knowledge Test (DCKT; Stupar, Sempértegui, & Bekker, 2010b) was developed. This 77-item multiple-choice test was designed as a measure of diversity competence (knowledge) level other than self-reported knowledge. The items reflect the main knowledge elements reviewed in the training, which include current models and theories on cultural and diversity competencies and evidence-based information on ethnocultural features interacting with other diversity factors, prevalence, etiology, manifestation, diagnosis and treatment of depressive disorders among ethnic minorities, in particular Turkish- and Moroccan-Dutch (see Appendix A for the content and methods of the training).

Participants are asked to choose one out of three options per item, even if they are not sure about the correct answer. Responses are dichotomously coded as right or wrong (1 – 0) and added for a total score. To illustrate, one question referring to the age-ethnicity interaction on the symptoms of depression: "To what extent is there increased suicidal ideation among Turkish- and Moroccan-Dutch adolescents?": a) Turkish-Dutch adolescents report higher levels of suicidal ideation; whereas Moroccan-Dutch adolescents report lower levels of suicidal ideation than native Dutch peers. b) Both Turkish- and Moroccan-Dutch adolescents report higher levels of suicidal ideation than native Dutch peers. c) Both Turkish- and Moroccan-Dutch adolescents report lower levels of suicidal ideation than native Dutch peers. (The correct answer is c). We report the psychometric properties of the AaSK and the DCKT in the results section. Both instruments (in Dutch) are available upon request from the authors.

Satisfaction with training. After each module, participants were asked to evaluate five aspects of each element of the training, namely: (i) the quality of the content, (ii) the trainers'

expertise; (iii) the adjustment to prior knowledge, (iv) the quality of the experiential exercises, and (v) the applicability of the reviewed material to clinical practice. The ratings were made on a 5-point scale ranging from 1 "very bad" to 5 "very good". Participants were also asked to write down the elements they perceived were left out and/or needed improvement.

Data Analysis

We performed statistical analyses using SPSS, version 21.0. We established significance at p-value <.05 and we calculated Cohen's d effect size at each measurement moment. First, we examined the internal consistency of the used measures. Second, we used t-tests for independent samples or chi-square analyses to compare participants' sociodemographic characteristics, acculturation level and baseline diversity competence between intervention groups. Third, we conducted linear mixed models to examine the effectiveness of the training to increase population-specific diversity competence and knowledge after the training and at three-month follow-up. Examination of the estimates of fixed effects allowed assessment of the significance of the changes between pre- and post-training and between post-training and follow-up, between conditions. Advantages of linear mixed models above repeated-measures ANOVA include robustness against violation of the assumptions of sphericity and independence of observations. Furthermore, cases with missing data are accommodated in the analyses (Blackwell, de Leon, & Miller, 2006). Analysis of the Bayesian Information Criterion indicated the use of compound symmetry covariance as the best fitting structure, which assumes equal covariance for all combinations of repeated measures as well as equal variances. The models included a fixed term for time, a fixed intercept and interactions between time and training condition to determine if the patterns of change over time differed between conditions. We included as confounders those variables that showed significant differences between the two groups at baseline, and that also correlated significantly with the outcome variables. Before conducting the analyses, we examined the data for outliers. The variable "years of work at current workplace" contained a legitimate outlier, which was converted into a less extreme value (35 to 17) to conserve the case and preserve accuracy (Tabachnick & Fidell, 2007). Next, we visually inspected Q-Q plots showing that the unstandardized residuals of all outcome variables were normally distributed. The assumption of homogeneity of variances was violated by most outcome variables at pre-training (except skills), meaning that the conditions presented different variance distributions before the training. However, both groups had comparable sample sizes, which makes the F-test robust against violations of this assumption.

Results

Psychometric Properties of Measures

The attitude-awareness and the skills subscale of the AaSK showed medium to good reliability across the three measurements (Cronbach's α = .65 –.78; Cronbach's α = 69–.80, respectively).

The knowledge subscale showed good reliability across the three measurements (Cronbach's α = 88–.92). The reliability for the total scale was very good across the three measurements (Cronbach's α ranged .90–.92). The subscales correlated positively and moderately with each other, showing simultaneously enough relatedness and differentiation properties (correlation coefficients ranged .53 – .78). As these results agree with what could be expected between various facets of (the same) construct of diversity competence, this can be seen as a first indication of good content validity.

The reliability of the total DCKT scale ranged Cronbach's α = 62 – .75 across the three measurements. A value above .60 is a fair reliability level for knowledge or achievement tests, as knowledge about multiple, not necessarily convergent subdomains was tested (Graham, 2006; Nunnally, 1978).

Descriptive Analyses

At baseline, independent sample t-tests showed no significant differences between groups for the subscales and overall score of self-reported diversity competence or for overall score on diversity competence knowledge. Independent sample t-tests and correlation analyses with the outcome variables were used to determine possible confounders among the sociodemographic variables. Though there were no significant differences between the training and control conditions on sociodemographic characteristics or acculturation, the between-group differences on the variables age and percentage of ethnic minority patients in case-load were marginally non-significant. In addition, the chi-square test of the variable education level was not robust. Only the variable describing the percentage of ethnic minority patients in case-load showed significant correlations with the outcome variables, therefore it was analyzed as a confounder in a second linear mixed model. See Table 1 for the descriptive analyses.

LMM Analyses on Effectiveness of the Training

The linear mixed model revealed significant interactions between time and training condition on total knowledge test (F = 5.79, df = 55.93, p = .005), self-reported attitude-awareness (F = 3.89, df = 61.28, p = .02), self-reported knowledge (F = 9.28, df = 56.71, p < .001), and total self-reported diversity competence (F = 5.85, df = 58.47, p = .01). Regarding these aspects of diversity competence, the therapists of the training condition showed significant improvement after the training in comparison with the therapists of the control condition. Examination of the estimates of fixed effects of the interaction between time and training condition shed light on the different patterns of change between conditions. Significant changes between pre- and post-training scores were found regarding total knowledge test (t = -3.40, df = 54.92, p = .001), self-reported attitude-awareness (t = -2.69, df = 59.54, p = .009), self-reported knowledge (t = -4.21, df = 56.21, p < .001), and total self-reported diversity competence (t = -3.25, df = 57.67, p = .002) of the participants of the training condition. The scores of the controls did not change between pre- and post-training measurement. The effect sizes of the differences on mean score at post-training between training and control condition were large (see Table 2).

Table 1. Comparison of Sociodemographic Characteristics and Correlation with the Measures at Post-training (T2) (N=40)

| | Study Condition | | | | | | | | | | |
| | Training[a] | Control | | | | Post-training (T2) measures | | | | | |
Variable	M (SD)	M (SD)	t	df	p	1	2	3	4	5
Age	43.11 (10.03)	35.75 (12.08)	1.94	36	.05	.30	.28	.23	.29	.03
Total education (years)	21.28 (3.78)	20.75 (3.72)	0.43	36	.66	.27	.09	-.01	.10	.19
Years at current job	5.72 (3.99)	3.99 (5.21)	1.10	36	.27	.39*	.25	.29	.34	-.14
Working hours per week	26.22 (9.35)	27.95 (6.94)	-0.65	36	.51	.16	.16	.03	.12	.11
Percentage ethnic minority patients in case-load	48.83 (30.48)	32.71 (19.02)	1.86	33	.07	.24	.56**	.52**	.51**	-.18
Previous training (hours)	9.00 (11.10)	5.58 (8.90)	1.05	36	.29	-.02	.05	.08	.05	.15
Acculturation-Maintenance	44.23 (6.48)	45.79 (4.46)	-.83	34	.40	-.01	.07	-.20	-.06	-.14
Acculturation-Adaptation[b]	35.00 (15.85)	36.04 (10.45)	-.14	11	.88	-.56	-.29	-.11	-.21	.08

| | Study Condition | | | | | | | | | | | |
| | Training[a] (n=20) | | Control (n=20) | | | | | Post-training (T2) measures[c] | | | | |
Variable	n	%	n	%	χ^2	df	p	1	2	3	4	5
Gender												
Female (0 = male, 1 = female)	18	94.7	19	95.2			.10[b]	-.12	-.17	-.23	-.19	-.06
Ethnicity												
Non-native Dutch (1; 0 = native Dutch)	5	27.8	8	40.0	.20	1	.65	.31	.32	.19	.37*	-.56**
First-generation immigrant	4	22.2	3	15.0								
Second-generation immigrant	1	5.6	5	25.0								
Turkish/Moroccan ethnicity (0 = no, 1 = yes)	3	15.8	1	5.0			.34[b]	.25	.08	.18	.21	-.19
Language in daily life												
Other than only Dutch	4	22.2	4	21.1			.10[b]					
Education level[d]												
Middle-high vocational (1)	6	35.3	4	21.1	0.98	2	.61	.06	-.10	-.01	-.02	.05
University (2)	6	35.3	9	47.4								
Psychotherapeutic specialization with national registration (3)	5	29.4	6	31.6								
Religious background												
Catholic, Muslim	9	50.0	13	65.0	.36	1	.54					
Not religious	9	50.0	7	35.0								
Sexual Orientation												
Heterosexual	18	100	20	100								
Marital Status												
Married or cohabitating	14	77.8	16	80.0			.10[b]					

Table 1. Continued

Variable	Training[a] (n=20)		Control (n=20)		χ^2	df	p	Post-training (T2) measures[c]				
								1	2	3	4	5
	n	%	n	%								
Single (incl. divorced)	4	22.2	4	20.0								
Children (yes = 1)	10	58.8	7	35.0	1.25	1	.26	-.23	-.36*	-.40*	-.36*	.14
Experience with diversity competence (0 = no; 1 = yes)												
Previous training in diversity or cultural competence	9	50.0	7	35.0	.36	1	.54	-.003	-.12	-.10	-.08	-.22
Attendance to clinical supervision	2	11.1	1	5.0			.59[b]	-.30	-.36*	-.30	-.32	.11
Previous training for working with interpreters	8	44.4	3	15.0			.07[b]	.06	-.36*	-.39*	-.39*	-.24
Contact with ethnic minorities outside work	13	72.2	16	80.0			.70[b]	.004	-.20	.15	-.05	-.01

Note. [a] One female participant failed to fill-in the socio demographic questionnaire. Tests and percentages shown excluded this case. [b] Two-tailed Fisher's exact test (cells with less than expected count). [c] Spearman's rho. [d] Not robust.
1 = Attitude-Awareness; 2 = Skills; 3 = Self-reported knowledge; 4 = Total diversity competence; 5 = Knowledge test.
*p < .05, **p < .01, ***p<.001.

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The improvement seen at post-training for the training condition remained stable at follow-up for all variables (self-reported attitude-awareness, self-reported knowledge, and total self-reported diversity competence), meaning that the changes in mean scores seen at follow-up (a slight decrease in all cases) were not significant. However, these findings should be interpreted carefully as there was a high attrition rate at follow-up.

Analyses indicated a significant main effect for training condition regarding self-reported skills (F = 9.11, df = 42.94, p = .004). The skill scores of the training and control group differed across the measurement moments. On average, the participants of the training condition showed higher skill scores (see Table 2 for a complete summary of the results).

Controlling for the percentage of ethnic minority patients in the case-load of the therapists at baseline, there was a significant change in scores on total test knowledge between post-training and follow-up (t = -1.97, df = 50.15, p = .05). This finding showed that the scores of the participants in the training condition on total knowledge test dropped significantly at three-month follow-up.

Satisfaction with the Training

Assessment of therapists' satisfaction with the training showed positive outcomes. Participants (including the one excluded from the main analyses) gave the training an overall mean score of 4.12 (SD = .60), which was equivalent to a 'good' evaluation. In detail, participants were satisfied with the quality of the content of the presentations and discussions (M = 4.03, SD = .19) and with the trainers' expertise (M = 4.25, SD = .20). They especially appreciated the evidence-

Table 2. Estimated Marginal Means and Fixed Effects of Self-reported Diversity Competence and Knowledge Test

Variable	Pre-training (t1)			Post-training (t2)			Follow-up (t3)			C	T	C*T	C*T T1 vs. t2	C*T T2 vs. t3
	TG (n=19) M (SE)	CG (n=20) M (SE)	d	TG (n=18) M (SE)	CG (n=16) M (SE)	d	TG (n=13) M (SE)	CG (n=8) M (SE)	d	F (df)	F (df)	F (df)	t (df)	t (df)
Attitude-Awareness (7-35)	25.07[a] (0.66)	25.29 (0.64)	-0.07	26.79 (.67)	24.30 (.70)	0.86	26.85 (0.76)	24.94 (0.92)	0.66	3.07 (42.41)	0.73 (61.28)	3.89* (61.28)	-2.69** (59.50)	-0.47 (61.44)
Skills (7-35)	21.87 (0.78)	19.84 (0.75)	0.60	23.17 (0.78)	20.16 (0.81)	0.89	23.09 (0.87)	19.467 (1.04)	1.08	9.11** (42.94)	1.12 (59.97)	0.83 (59.97)	-0.90 (58.82)	0.46 (59.76)
Knowledge (7-35)	20.63 (0.95)	19.50 (0.92)	0.27	24.14 (0.96)	18.60 (0.97)	1.34	23.89 (1.03)	19.51 (1.16)	1.06	8.82** (40.85)	4.56* (56.71)	9.28*** (56.71)	-4.21*** (56.21)	-0.90 (56.40)
Total diversity competence	67.19 (2.07)	64.61 (1.99)	0.28	74.10 (2.07)	63.12 (2.13)	1.23	73.87 (2.27)	64.01 (2.65)	1.10	8.95** (42.09)	2.86* (58.47)	5.85** (58.47)	-3.25** (57.67)	-0.35 (58.18)
Total knowledge test (0-77)	43.34 (1.55)	43.71 (1.47)	-0.05	49.94 (1.55)	44.74[b] (1.53)	0.79	46.20[c] (1.77)	44.05 (1.86)	0.32	1.35 (40.81)	10.93*** (55.93)	5.79** (55.93)	-3.40** (54.92)	-1.42 (56.35)

Note. TG = Training group, CG = control group, C = Condition, T = Time. [a] n = 19, [b] n = 17, [c] n = 10.
* p < .05, ** p < .01, ***p<.001.

based focus of the presentations and the quality of the study material they were asked to read in preparation for each section of the training. Participants were moderately positive about the adjustment of the contents to their foreknowledge (M = 3.91, SD = .23), the quality of the experiential exercises (M = 3.91, SD = .22), and the applicability of the reviewed material to their clinical practice (M = 3.91, SD = .23). Accordingly, participants expressed they would have welcomed more concrete and more complex clinical cases as part of the training, with more extensive discussion and practice of specific diagnostic and therapeutic techniques. Some participants expressed that they had expected to receive more concrete guidelines to handle specific problematic situations during therapy with Turkish- and Moroccan-Dutch patients. Although a number of participants considered some exercises to be insufficiently attuned to their foreknowledge, some others stated that the training helped them realize that there is still a lot to learn about diversity competence for daily clinical practice.

Discussion

The current study presented and evaluated a diversity-oriented competence training program for therapists, which was particularly designed for treating Turkish- and Moroccan-Dutch patients with depression. The intersectionality paradigm was the main theoretical framework combined with current mental health care models of ethnocultural and diversity competence and up-to-date research findings and best practices in clinical work with these groups.

The findings partially supported the hypothesis that population-specific, diversity-oriented competence training increases diversity-related knowledge, awareness, skills, and attitudes. After the training, compared to controls, participants in the training condition had higher scores on self-reported attitude-awareness, knowledge, and total diversity competence; and they achieved higher total knowledge test scores. Significant improvement on self-reported skills was absent after the training. The absence of any effect on skills indicates that social desirability probably played a minor role in this study. On the other hand, skills are one – if not the most– important component of diversity competence, which in other studies have been positively influenced by training. The difference with those studies may lie in the different assessment of skills that we used with our scale. Whereas other instruments mainly assess skills related to acquiring knowledge and awareness (Kumas-Tan et al., 2007), our scale sought to assess self-reported skills related to actual practices in daily contact with patients, such as working with interpreters over the telephone or using existing diversity interviews during the assessment phase. For these skills, a two-day training program may not have been long enough for therapists to improve their skills or to integrate new skills and feel confident about mastering them. One of the limitations of the training might also have been that the strong theoretical focus on intersectionality and other competence models and knowledge occurred at the expense of opportunities to practice with new skills. The participants' evaluations support this idea, as they were generally satisfied with the training and the quality of its content, but expressed the

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wish to include more discussion of clinical cases and more practical exercises in the training. Nevertheless, it may be unreasonable to expect that well-established clinical approaches change in a few days or weeks. In order to reinforce new skills, future training should integrate more skill-enhancement exercises, and long-term programs should be implemented that allow therapists to gain more insight into diversity competence and its applications in daily practice. Concerning the effects at follow-up after three months, findings partially supported the second hypothesis. At follow-up, the effects achieved at post-training on self-reported attitude-awareness, self-reported knowledge, and self-reported total diversity competence remained stable, whereas there was a significant decrease in total knowledge test scores of the training group when we controlled for percentage of ethnic minority patients in caseload. This phenomenon could be caused by the high attrition rate at follow-up, but it most probably indicates difficulties in retaining the gained knowledge. Here again, long-term programs that help maintain competence improvements seem necessary. Follow-up relapse may also be related to difficulty remaining attuned to the intersectional concept of diversity instead of the conventional focus on ethnic culture. The only other training program we could identify that included the intersectionality paradigm found that medical providers, particularly those with less academic education, had trouble switching their mind-set towards a more integrative way of looking at diversity (Celik et al., 2012). The authors of that study attributed these findings partly to an unsatisfactory adjustment of their training to fit the prior knowledge of participants. According to therapists' feedback, different levels of prior knowledge also may have influenced the results of our study. Some participants noted that certain elements of the training were too basic, whereas others commented that most of the discussed material was new to them. In the future, better adjustment to the therapists' prior level of knowledge would be desirable. However, given that multidisciplinary teams, with varied competence levels, are rather the rule than the exception in mental health care settings, a more realistic objective might be to help therapists to enhance diversity competence transfer within their teams. We found that there was discrepancy between self-assessed competence and actual competence of the therapists in the training condition at follow-up. Self-assessed competence remained high, whereas scores on the knowledge test showed significant decrease. This discrepancy is consistent with authors' findings indicating that self-reported competence is not a strong predictor of competent performance (Worthington, Mobley, Franks, & Tan, 2000). It also raises questions about the role of knowledge instruction. After training, retention of specific knowledge might decrease, but concepts or attitudes necessary to recognize aspects of diversity relevant to the therapeutic process might remain, which would explain the persistently high self-perception of competence. Further research is needed to clarify the mechanisms and consequences of this discrepancy.

Limitations

This study has several limitations. First, the sample size was not large enough to assess or control for some sociodemographic differences between groups and their possible role as predictors of change in competence. Together with the sample size, high attrition rate at follow-up might

have also compromised the validity and generalizability of the findings. On the other hand, the use of mixed-model analyses allowed us to address our research questions. Second, this study relied on newly developed instruments to assess self-reported diversity competence and population-specific diversity knowledge. Though the reliability of these instruments and their subscales at the different measurement moments appeared to be satisfactory, other psychometric properties, such as construct validity, should still be thoroughly examined in the future. Further operationalization and standardization of measures of diversity competence and the application of the intersectionality paradigm are needed. In general, the field of diversity competence would benefit from common, reliable, and valid measures of diversity competence in clinical practice. The use of video vignettes, video recordings, or evaluation reports by experienced supervisors might be better ways to evaluate real life competence and effectiveness of trainings. However, linking therapists' diversity competence to clinical patient outcomes, such as symptom reduction, improvement of quality of life, satisfaction with treatment and adherence, is the ultimate evaluation method. A third limitation involves the population-specific section of the training. There are concerns that population-specific information during training may reinforce stereotypes and that there is not yet evidence that gaining knowledge leads to improved health care outcomes (Dogra & Karim, 2005). Although population-specific insights might, at first sight, seem incongruent to the intersectionality paradigm, the reported training used both approaches complementarily. This method allowed us to pay careful attention to the intersection of aspects of diversity regarding the Moroccan and Turkish populations (e.g., influence of gender, age, education, etc.) and to highlight more precisely these aspects during the training. At the same time, we rendered enough importance to the ethnocultural-related factors which, given the antecedent of these groups in the Netherlands (labor migration), might be expected to still play an important role for some of the patients and therapists. In addition, conscientious efforts were made in the training condition to diminish the potential limitations of population-specific approaches by integrating scientific mindedness (forming and testing hypotheses), and dynamic sizing (knowing when to generalize and when to individualize; S. Sue, 1998) as analytical tools to consider within-group differences of both the therapists and the patients.

Conclusion

Our approach, like any other, has both benefits and limitations (Kirmayer, 2012), and it likely does not cover the full range of issues necessary to provide high quality care to diverse populations. Nevertheless, the current study has made some progress towards the evaluation and improvement of a diversity-oriented competence training that highlights the local history and contextual reality of the Turkish- and Moroccan-Dutch patients with depression, and at the same time that looks through the lens of intersectionality to expand the focus to as many salient aspects of diversity as possible. The intersectionality paradigm seems relevant to clinical

practice, and provides a more realistic portrait of diversity, but this model has only rarely been integrated in mental health care settings in Europe. In this study, the availability of a reference group, who did not receive the training, and the use of diverse evaluation methods next to self-report instruments, allowed a careful evaluation of the effectiveness. Evaluation of effectiveness is a necessary first step towards linking therapists' diversity competence with clinical patients' outcomes, such as symptom reduction, improvement of quality of life, satisfaction with treatment, and adherence, which are the next necessary steps.

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Patient treatment outcomes following diversity-oriented competence training: The case of Turkish and Moroccan immigrants with depression

Abstract

Introduction

Some immigrant and ethnic minorities, such as Turkish- and Moroccan-Dutch populations, show higher depression rates and are at risk of receiving less appropriate psychotherapeutic treatment. We examined the effectiveness of diversity-oriented competence training for therapists to improve patient treatment outcomes.

Method

We conducted a quasi-experimental study comparing the clinical and satisfaction outcomes of 41 Turkish- and 36 Moroccan-Dutch outpatients in two groups: one group (n=59) received treatment from therapists who had received a two-day training and supervision in diversity-oriented competence and a control group (n=18), whose therapists did not receive such training. We used bootstrapped (M)ANCOVAs to compare between-group satisfaction with treatment and therapist competence; logistic regression to examine dropout predictors; and generalized linear mixed model analysis to examine whether the changes over time (baseline, 9-month assessment, posttest, 3-month follow-up) in clinical outcomes differed between groups.

Results

There were no between-group differences on satisfaction with treatment or therapist competence. Patients in the control group showed a higher probability of dropping out of the treatment. Patients in the experimental group showed a significantly larger increase in satisfaction with psychological health than in the control group. There was no evidence that improving the therapists' diversity competence leads to a greater symptomatic reduction. Patients in both groups showed a reduction in general, depressive, anxiety, and somatic symptoms.

Conclusion

Diversity competence could be a promising addition to general psychotherapeutic competence to improve patient engagement and satisfaction with psychological health. Replication with an improved version of the diversity-oriented training and larger samples is warranted.

Introduction

With both an increase in population diversification and the study of social determinants of health, the recognition of mental health status and treatment disparities between racial and ethnic groups has also increased (Huang & Zane, 2016). In addition, researchers and clinicians more often recognize the need for developing and testing specific strategies to improve the inclusion and effectivity of treatments offered to migrants and ethnic minorities (Sandhu et al., 2013).

The concept cultural competency to improve care for ethnic minorities has evolved in the last four decades. Whilst research initially focused mainly on the racial and ethnic aspect of culture (S. Sue et al., 2009), the current trend is to use the broad perspective of culture that also includes the multiple cultural identities of individuals and their contextual realities (Good & Hannah, 2015; Kirmayer, 2012). Our concept of diversity competence departs from this point and intends to move further towards the recognition (also the labelling) of the intersecting social realities of individuals, which are greatly determined or influenced by social and biological aspects of diversity (Sempértegui et al., 2017; Van Mens-Verhulst & Radtke, 2011). A person is not only a member of a racial/ethnic group, but also a man, woman, gender-neutral person, a teenager or middle-aged, a religious or atheistic person, etc., and every combination of these diversity aspects is related to a specific societal position and daily-life experiences of, for instance, power, discrimination, advantage, or inclusion (Sears, 2012; Van Mens-Verhulst & Radtke, 2011). Mental health care is not an exception, and therapists' skillful, knowledgeable, and sensitive management of patients' intersectional-based characteristics and concerns, outside and inside the therapeutic relationship (diversity competence), might contribute to reaching equity for ethnic minority populations (Green et al., 2017; Kapilashrami et al., 2015).

The question is, does therapist competence regarding these issues contribute to better mental health care? Most studies have focused on the therapists when evaluating the effectiveness of cultural or diversity competency training (Bhui, Warfa, Edonya, McKenzie, & Bhugra, 2007; Lie et al., 2011; Truong, Paradies, & Priest, 2014), finding positive results regarding the therapists' attitudes, awareness, skills, and knowledge to work with specific ethnic groups (Celik et al., 2012; Huey et al., 2014; Renzaho et al., 2013; Sempértegui et al., 2017). However, improvement of therapists' competencies is pointless if it does not lead to better treatment outcomes for the patients they intend to help. In this respect, according to several recent reviews, only a few studies have examined if improving therapists' cultural competencies also contributes to better patients outcomes, and even fewer studies have examined the effectiveness of diversity-oriented competence training specifically targeting *mental* health care or European ethnic migrant populations (Alizadeh & Chavan, 2016; Govere & Govere, 2016; Huey et al., 2014; Lie et al., 2011; Renzaho et al., 2013; Truong et al., 2014). The findings are mixed; a great share of studies showed positive outcomes for patient satisfaction with treatment and providers, but methodologically stronger studies found no effect (Alizadeh & Chavan, 2016; Govere & Govere, 2016). Of the reviewed studies with mental health care providers examining clinical outcomes

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following training (Huey et al., 2014), one study found no differences on symptom level (Majumdar, Browne, Roberts, & Carpio, 2004), whereas another found reduction in depressive symptoms only for black youths vs. Latino and white youths (Ngo et al., 2009). Furthermore, one low-quality study found lower attrition for the intervention group (Lie et al., 2011; Wade & Bernstein, 1991), while another was of too low in quality to draw conclusions (Lie et al., 2011; Way, Stone, Schwager, Wagoner, & Bassman, 2002).

In this study, we examine, at patient level, the effectiveness of training in diversity-oriented competence by mental health professionals treating Turkish- and Moroccan-Dutch patients with depressive symptoms. The focus on these specific ethnic groups was determined by societal concerns, raising the necessity to bridge the gap between their high prevalence rates of depression and other psychological problems on the one hand, and less optimal treatment experiences as apparent from, e.g., lower care uptake and higher attrition related to ethnicity and other diversity aspects, on the other (Balkir Neftci & Barnow, 2016; Blom et al., 2010; Fassaert, Peen, et al., 2010; van de Beek et al., 2017). The training was aimed at developing diversity competence, which enables therapists to use the intersectionality paradigm to frame their personal and clinical analyses, their patients' individual and illness characteristics, their interaction, acknowledging inter- and intra-group variation, and the influence of contextual factors (Bechtel & Ness, 2010; Celik et al., 2012; Sempértegui et al., 2017; Van Mens-Verhulst, 2003). In this training, we also integrated population-specific insights, in terms of ethnocultural aspects that might be relevant when working with Turkish and Moroccan immigrant populations (Sempértegui et al., 2017).

Based on previous research, we expected that the patients in the diversity-oriented competence group would express more satisfaction with the received treatment and would consider their therapists as more diversity competent than the patients in the control group, whose therapists did not receive training. Due to little prior research linking patient outcomes with diversity-oriented competence training, we did not formulate specific hypotheses regarding the effect of the intervention on an adherence level, expressed in no-show and dropout rates or on clinical outcomes, which were recovery of depression, severity of depressive symptoms, overall psychopathology, and quality of life.

Method

Design and Procedure

A multi-centered, quasi-experimental study was conducted to examine the effectiveness of diversity-oriented training aimed at improving therapists' diversity competence in working with Turkish- and Moroccan-Dutch patients with depression. Four therapist teams from 3 Dutch secondary mental health care institutions participated in the study. Two of the teams were randomly allocated (using the SPSS random number generator) to the quasi-experimental diversity-oriented competence group (DCG) and the other two teams to the control group (CG).

The therapists in the DCG received diversity-oriented competence (DC) training and subsequent DC supervision; the CG therapists performed treatment as usual, did not receive any training, and received neutral supervision. Between January 2011 and September 2013, the therapists from both groups approached the patients that met inclusion criteria during the intake phase and asked them whether they agreed that their routine evaluations would be used for the study purposes. Patients who agreed to participate and who gave their informed consent were approached by a research assistant to schedule the evaluation assessments. The study procedure was reviewed by the Dutch Medical Ethical Commission for Mental Healthcare institutions (METiGG) and was qualified as research that examines the quality of routine clinical practice.

Participants and Inclusion/Exclusion Criteria

Participants, aged 18 years or older, were outpatients receiving therapy from therapists belonging to the participating teams, were of Turkish or Moroccan ethnic background (born in Turkey or Morocco, or with one or both parents born abroad; CBS, 2013), and had depressive disorders or symptoms according to clinical DSM-IV diagnoses (APA, 2000) determined by clinicians during intake interviews before referral for assessment. Patients with all types of depressive disorders were included but also with somatoform, anxiety, and adjustment disorders, under the condition that the depressive symptoms were also relevant complaints (e.g., adjustment disorder with depressed mood, pain disorder related to psychological factors). We ensured this premise by only including patients who met the criteria for clinically relevant depressions at baseline (score of ≥16 on the CES-D).

Exclusion criteria were acute suicidal behaviour, amnesic and other cognitive disorders, intellectual impairment (IQ ≤80), bipolar disorder (I or II), schizophrenia, or other psychotic, dissociative, or personality disorders.

Intervention

Diversity-oriented training
A two-day theoretical and practical diversity-oriented training was provided to the therapists in the experimental group. The training integrated population-specific elements that addressed, among others, the societal position of Turkish- and Moroccan-Dutch migrant patients, culturally specific illness models, symptomatic manifestation of depression, contextual factors influencing access to and provision of mental health care, and the extant intra- and intergroup similarities and differences. The training also included evidence-based insights and guidelines for the assessment, diagnosis, and treatment of depression of Turkish and Moroccan patients based on findings of international and national studies and clinical guidelines (Sempértegui et al., 2019; Sempértegui, Knipscheer, et al., In preparation). The intersectionality model of diversity was the main underlying framework and analytical tool used during the training. Intersectionality acknowledges that aspects of diversity (e.g., age, sex/gender, race/ethnicity, and socioeconomic status) determine the individual's societal position in dynamic, mutual interaction and, therefore, their experiences of exclusion, inclusion, power, or disadvantage (Collins, 1990;

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Crenshaw, 1989; McCall, 2005; Van Mens-Verhulst & Radtke, 2011). A detailed description of the development and content of the training was published earlier (Sempértegui et al., 2017).

Diversity-oriented supervision
Group clinical supervision was provided to the teams in the experimental group. The supervision meetings were led by two experienced, cross-culturally and diversity oriented clinical psychologists and focused on the challenges of working with a diverse population, zooming in on Turkish- and Moroccan-Dutch patients. During the meetings, the therapists' clinical cases were discussed, highlighting the relevance of aspects of diversity during all stages of the treatment and therapeutic relationship. Other topics addressed were anthropological and systemic theoretical frameworks, use of systemic tools like the genogram and timeline, awareness of societal mechanisms, impact of migration and intergeneration differences, discrimination and racism, awareness and knowledge of one's own diversity, culture, ethnicity, and pitfalls as a professional. The one-hour supervision meetings started after the training, once every three months over the course of eighteen months during the patients' recruitment period.

Control group
Therapists in the control condition did not receive the aforementioned training. They received group clinical supervision with the same frequency as the experimental group (one hour, every three months over eighteen months. Meetings for the control group were organized diversity-neutrally, which meant that therapists could discuss a clinical case or their own difficulties during clinical practice, without paying special attention to culture or diversity.

Outcome Measures

Assessments took place right after the intake (pretest), every nine months during the treatment period(T2-T5), after completing the treatment (posttest), and during the follow-up 3-month later. The number of assessments thus varied depending on the treatment duration and the patients' availability and cooperation and ranged from one to seven. The assessments were planned between January 2011 and August 2014 and were conducted in the patients' preferred language (Turkish, Moroccan Arabic, or Berbers) by trained student interviewers (one male and three female students). The Turkish versions of the instruments mentioned below were used when available or translated from Dutch using the back-translation method. Since Moroccan Arabic and Berber do not exist in written form, and only few Moroccan-Dutch patients were able to speak or read standard Arabic, interviewers used the Dutch version of the instruments and core themes and words, which were pre-translated into Moroccan Arabic and Berbers.

Primary Clinical Outcome Measure

 Depressive symptoms
The severity of depressive symptoms was measured with the Dutch and Turkish versions of the Center for Epidemiological Studies Depression Scale (CES-D; Bouma, Ranchor, Sanderman, &

van Sonderen, 2012; Spijker et al., 2004). This is a self-report questionnaire containing 20 items with response categories on a 4-point Likert scale, varying from 0 'rarely or none of the time' to 3 'mostly or all of the time'. Following the manual, mean imputation was conducted if four or fewer items were missing. The scale was considered invalid if five or more items were missing or if all items were answered "always" or "never" (Radloff, 1977). In this study we used the CES-D as a one-dimensional construct to assess depressed mood, which has been found to be the most valid and reliable use of the scale among Turkish (Lehmann et al., 2011) and Turkish-Dutch (Spijker et al., 2004) samples. The reliability in the current study was good for both Turkish- and Moroccan-Dutch patients (Cronbach alpha at baseline = .82 Turkish-, .80 Moroccan-Dutch, .82 both groups together).

Concerning the CES-D total score, a cut-off of ≥ 16 is generally considered as an indicator of clinically relevant depression (Bouma et al., 2012). We used this indicator to examine **recovery**, which was defined by reaching a score under 16 at the posttest.

Secondary Clinical Outcome Measures

Psychological distress

We used the Brief Symptom Inventory (BSI; Derogatis, 1975) to measure clinically relevant psychological symptoms. This instrument consists of 53 items covering nine symptom domains: somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism; and three indices of distress (Global Severity Index (GSI), Positive Symptom Distress Index, and Positive Symptom Total) measuring levels of symptomatology, intensity of symptoms, and number of reported symptoms, respectively. Participants rank the intensity of distress experienced for each symptom on a 5-point Likert scale ranging from 0 "not at all" to 4 "extremely". The total subscale scores are the average of the subscale items. In this study, we used the GSI, which is the most sensitive indicator of a participant's distress level, the Depression, Somatization, and Anxiety subscales, with mean imputation if maximal one item per subscale was missing. The BSI has been found a relatively reliable and valid cross-cultural instrument (Aroian, Patsdaughter, Levin, & Gianan, 1995), and the Dutch version (Beurs & Zitman, 2006) also showed good psychometric properties. We back-translated the Dutch version to Turkish. The subscales' reliability in this study was good (Cronbach's alpha for both groups at baseline depression = .72; somatization = .79, anxiety = .80).

Quality of life

Quality of life was measured with the Dutch version of the abbreviated World Health Organization Quality of Life instrument (WHOQOL-Bref; WHOQOL Group, 1998). This instrument was developed to assess the participants' perception of their quality of life regarding a broad range of domains (reflected in four subscales: Physical Health, Psychological Health, Social Relationships, and Environment) as well as taking cross-cultural issues into account (Trompenaars, Masthoff, Van Heck, Hodiamont, & De Vries, 2005). The instrument consists of

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26 items with response categories on a 5-point Likert scale ranging from 1 "not at all/ dissatisfied" to 5 "completely/ very satisfied." Two items constitute the General Facet of the instrument, measuring overall quality of life and general health satisfaction. Scales with more than 20% of the data missing were discarded, and mean imputation was performed when maximal 2 items for each domain were missing (except domain Social Relationships, which only allowed one missing item). The Dutch version has shown good content and construct validity and reliability (Trompenaars et al., 2005). We back translated the Dutch version to Turkish. The reliability in this study was acceptable for the domains Physical Health, Psychological Health, and Environment (Cronbach's alpha for both groups at baseline = .70; .68, .73, respectively). The reliability for Social Relationships was fair for both groups (Cronbach's alpha = .64), especially due to the low reliability in the Turkish group (Cronbach's alpha = .51) caused by a lower response to the item "how satisfied are you with your sex life?" The reliability for Moroccan-Dutch participants was good (Cronbach's alpha = .84).

Treatment Adherence

Dropout
The dropout measured in this study was defined as an early termination of treatment without agreement of the therapist. Moreover, patients who, after agreeing to continue therapy with their therapist, did not schedule follow-up appointments were considered dropouts. Reregistration of the patient within three months either after a regular termination or because of a dropout was regarded as a continuation of therapy if the patient was still experiencing depressive symptoms at the moment of reregistration. Early terminations of therapy, such as temporary breaks due to vacation, medical treatment, or referrals elsewhere, were not regarded as dropout. Dropout was coded as a dichotomous variable.

Missed and no-show appointments
A register of the number, type of therapy sessions, and attendance of the patients was kept during the treatment duration. Appointments were considered missed in every case that patients failed to attend scheduled appointments, regardless of the reason or whether patients cancelled the appointment beforehand (no-shows were considered missed appointments too). Appointments were considered no-shows when patients did not show up without previous notice, except when patients reported afterwards that the reason of the no-show was an emergency. We calculated the percentage of missed and no-show appointments by dividing the total number of missed/no-show appointments by the total number of planned sessions and multiplying this number by 100, resulting in a continuous measure.

Satisfaction with Treatment

Satisfaction with treatment
We used the version for evaluation of short-term outpatient and addiction mental health care of the Consumer Quality Index (CQI; Wijngaarden, Kok, & Sixma, 2008) to measure the quality

of health care domains as experienced by the patients. The CQI stems from the American Consumer Assessment of Health Plan Survey and the Dutch Quality of Care through the Patient's Eyes, and it is currently the Dutch standard instrument to measure the quality of health care. We back-translated the Dutch version to Turkish. The domains used in this study were Joint Decision Making, Relational Approach, Accomplishment of Therapeutic Objective, Subjective Symptom Change. Patients were also asked to rate how probable it is they recommend the institution to others (Institution Recommendation), and to rate their treatment (Treatment Evaluation; score 0–10). We also intended to use the subscales General Information Provision and Satisfaction with Discharge, but their internal reliability in the current study was low (Cronbach's alpha for both groups at baseline = .59; .46, respectively). The reliability of the other aspects in this study was good (Cronbach's alpha for both groups at baseline ranged .72 - .89).

Therapist diversity competence
Patients were asked to evaluate their therapists' competence to work with diverse populations as an additional evaluation to the CQI. The competences were categorized within the subscales Attitude (e.g., "Is your therapist sincerely interested in your cultural/ethnic background?"), Skills (e.g., "Is the communication with your therapist satisfactory?"), and Knowledge (e.g., "Does your therapist know enough about the societal position of your cultural/ethnic group and how it relates to your complaints?") with response categories on a 4-point Likert scale ranging from 1 'not at all, never' to 4 'always'. We developed a Dutch version, which we back translated to Turkish. The reliability of the subscales and the total scale at baseline was good in the current study (Cronbach's alpha for both groups of Attitude = .74; Skills = .83, Knowledge = .80, total = .94).

Additional Measures

Sociodemographic information (sex, age, own and parents' country of birth, highest education level, years of education, marital status, sexual orientation, religious background, employment, and income source), migration-related information (preferred language, migration reason, duration of stay in the Netherlands, and Dutch and native tongue proficiency level), and information on earlier psychological treatment (type of treatment, therapist type, and duration) were collected at baseline.

We also measured the acculturation strategies of the patients with the Acculturation Questionnaire (Arends-Tóth & Vijver, 2003). This 22-item, self-report questionnaire has two subscales: Cultural Maintenance, measuring participants' attitudes towards the original culture in different domains of life and Cultural Adaptation, measuring the attitude toward the host culture. Earlier research with Turkish, Moroccan, and Dutch female participants confirmed the two-factor model with principal component analyses and showed a good reliability of the two subscales (Arends-Tóth & Van de Vijver, 2007; Bekker, Arends-Tóth, & Croon, 2011). The reliability in the current study was good (Cronbach's alpha = .83 for Cultural Maintenance and .81 for Cultural Adaptation).

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Sample Size

We calculated the effect size based on the 45% dropout rate found in the treatment as usual condition of the only available study with Dutch immigrants (including Turkish and Moroccan) with depression (Blom et al., 2010) at the time of designing this study. We expected the dropout rate to be 28% in the DCG, which meant an effect size of .36. To achieve a power of 0.80 and an alpha of .025 on one-side tests of a chi-square test, we needed 95 patients at baseline in each group. This sample size would also be large enough to find between-group differences of .40 SD at the posttest and .40 SD at the follow-up.

Statistical Analyses

After checking the reliability of the instruments, we first compared baseline sociodemographic and clinical variables using independent samples t-tests for continuous variables and chi-square test for categorical variables. Second, we compared the scores on satisfaction between groups using MANCOVAs. Satisfaction with treatment and therapist diversity-oriented competence was only measured at the second to last (posttest) assessment moment. Given the varying duration of the treatment and the missed assessments of some patients, we formed one posttest measure by including the information of every patient's last available assessment point. When both the nine-monthly evaluations and a posttest evaluation were available, we selected the posttest evaluation, except when information on the target variables were missing in which case, we selected the last available complete evaluation. We controlled for the differing assessment moments (in months).

Third, we compared the dropout rates between the groups using a chi-square test, calculated the percentage of missed and no-show appointments, and compared percentage means between the groups using bootstrapped independent samples t-tests. Fourth, we conducted a logistic regression to examine whether group membership predicted dropout (yes/no), adjusting for sociodemographic characteristics, baseline depression severity, and treatment characteristics.

Fifth, we used generalized linear mixed model analyses to examine the changes over time of depression severity, general distress, somatic symptoms, anxiety symptoms, and quality of life (six aspects), and whether the changes over time (from pretest to posttest, fitting assessments T2-T5 in between) differed between the experimental and the control group (condition). Model building occurred hierarchically. The first model of every dependent variable contained the fixed effects for time and group with the interaction between time and group (time*group) being the main effect of interest in the present study. Depending on whether this interaction effect was significant or not, the second set of the models included the interaction term and additional fixed effects for the covariates sex, years of education, treatment duration, treatment type, and medication type. For each covariate, we tested the homogeneity of regression slopes assumption by including the interaction between the group and the covariate in our model. Non-significant covariate interactions were excluded from the final models. To account for differences in intercept between participants, we fitted a subject level random effect for intercept in all models (models including a random slope did not converge due to the small sample size).

Finally, following the aforementioned method to select the last available or posttest information, we compared the recovery rates of depressive symptoms (CES-D) between groups using a chi-square test. We performed statistical analyses using SPSS, version 22.0. We tested for the corresponding analyses assumptions. We established significance at p-value ≤ .05 for two-sided tests, and at ≤ .025 for one-sided tests when testing our hypotheses. As a result of the small sample size and low power, some possibly existing effects might have been non-significant. Therefore, we reported the effect sizes and the 95% confidence intervals only after having clearly stated that an effect was significant or not (Kramer & Rosenthal, 1999). We expressed the effect sizes by adjusted odd ratios (AOR), phi coefficient and Cohen's d (0.2 small, 0.5 medium, 0.8 large effect size; Cohen, 1998).

Results

Participants

Figure 1 shows the patient flow. Based on available registrations (covering 87% of the recruitment period in the DCG and 49% in the CG), the estimated total number of study candidates was 329. The main reasons for exclusion were participation refusal (26.1%), early referral or treatment interruption (14.6%), and not meeting inclusion criteria (10.9%). More participants were lost to reach in the control group than in the experimental group due to recruitment coordination problems resulting from institutional reorganizations. Eighty-two patients started treatment, of which 77 (46 Turkish- and 31 Moroccan-Dutch) were included in the intention to treat (ITT) analyses.

Table 1 describes the baseline characteristics of the participants. In general, both DCG and CG samples largely included late young-adult, first-generation, religious, heterosexual, low-educated, unemployed, married patients, with a mean duration of stay of 24.0 years (SD. 10.18, range 5-45), a mean self-reported Dutch writing proficiency of 3.0 (SD. 1.33, range 1-5), and a mean native-tongue writing proficiency of 4.1 (SD. 1.41, range 1-5). Patients in the DCG were more often women, first-generation migrants, and reported less years of education than controls. The proportion of patients receiving a combination of curative (CBT) and supportive treatment (i.e., case management, psychomotor therapy, and pharmacotherapy) was higher in the DCG (84.5% vs. 50.0%) whereas more patients received only a supportive treatment in the CG (27.8% vs. 6.8%). The average Global Assessment of Functioning (GAF) score was 57.2 in the DCG, and 53.9 in the CG. The groups neither differed on medication type, nor on treatment duration (mean 15.14, SD. 9.61), nor on baseline scores for the clinical measures (mean CES-D score 36.0, SD. 9.72).

Satisfaction with Treatment and Therapist Competence

We compared the posttest groups' scores on treatment satisfaction and therapist diversity competence to test our hypothesis that DCG participants were more satisfied with their
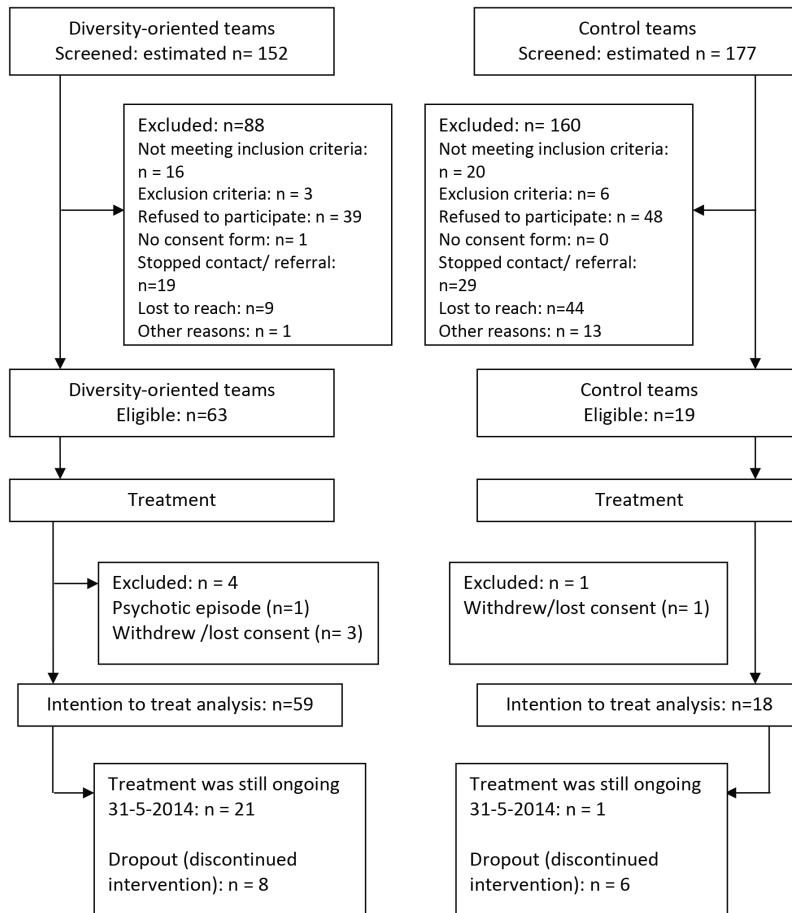
Figure 1. Patient flow diagram

treatment and therapist competences than CG participants were. Controlling for time of assessment, we did not find significant differences between groups on any facet of satisfaction with their treatment. Furthermore, we found small treatment effects for all the facets of satisfaction with the treatment, except one, namely, accomplishment of therapeutic objective. Although the patients in the DCG reported a higher accomplishment of their treatment goals in the posttest than the patients in the CG did (medium effect of Cohen's d = 0.52 (95% CI [0.15; 1.17]), these effects did not differ significantly between the groups, possibly due to the small sample size.

Also adjusting for time of the assessment, the groups did not differ significantly in their evaluation of their therapists' attitudes, skills, knowledge, or overall diversity competence. We also found small treatment effects for all the facets of therapist diversity competence. In

Table 1. Sociodemographic and Treatment Characteristics, and Test Scores at Baseline (pre-test) (N=77)

Sociodemographic characteristics	Experimental group (n=59)	Control group (n=18)	P	95% CI/ Cramer's V
Age at intake (years), mean (SD)	42.8 (9.3)	38.1 (8.5)	0.6	
Gender (female), % (n)	79.7 (47)	44.4 (8)	.01	.33
Ethnicity (Turkish), % (n)	61.0 (36)	55.6 (10)	.68	
Sexual orientation (heterosexual), % (n)	91.2 (52)	93.8 (15)	.75	
Religiousness (yes), % (n)	93.1 (54)	88.2 (15)	.52	
Education level, % (n)				
No- Low	55.9 (33)	33.3 (6)	.19	.21
Middle	33.9 (20)	22.2 (4)		
High	7.7 (6)	22.2 (4)		
Education (years), mean (SD)	8.3 (5.2)	13.3 (6.2)	.001	[-7.94, - 2.09]
Employed, % (n)	20.3 (12)	5.6 (1)	.14	.17
In welfare, % (n)	70.2 (40)	66.7 (12)		
Married/relationship, % (n)	67.8 (40)	61.1 (11)	.60	.06
Migrant generation (first), % (n)	96.6 (57)	77.8 (14)	.04	.29
Length of stay (years), mean (SD)	24.1 (10.0)	23.4 (11.4)	.83	
Acculturation, mean (SD)				
Participation acculturation strategy	34.5 (8.5)	37.9 (9.9)	.19	
Maintenance acculturation strategy	47.8 (7.1)	43.7 (8.7)	.07	
Dutch writing level	2.9 (1.3)	3.3 (1.3)	.23	
Dutch reading level	3.4 (1.3)	3.9 (1.2)	.16	
Native tongue writing level	4.1 (1.5)	4.1 (1.2)	.83	
Native tongue reading level	4.1 (1.4)	4.1 (1.2)	.95	
Treatment duration (months), mean (SD)	15.5 (9.1)	13.8 (11.2)	.51	
GAF score, mean (SD)	57.2 (4.2)	53.9 (4.7)	.01	[3.29, 1.19]
Main DSM-IV diagnoses at intake				
Depressive disorder	61.0 (36)	100 (18)	.02	.36
Somatoform disorder	20.3 (12)	0 (0)		
Anxiety disorder	5.1 (3)	0 (0)		
Adjustment disorder	13.6 (8)	0 (0)		
Psychotropic medication % (n)				
No medication	26.5 (13)	31.3 (5)	.93	.05
Antidepressant only	32.7 (5)	31.3 (5)		
Other psychotropic drugs	40.8 (20)	37.5 (6)		
Somatic medication, % (n)	65.4 (34)	64.7 (11)	.96	.01
Treatment received				
Only supportive therapy (motivational and structuring), % (n)	6.8 (4)	27.8 (5)	.05	.28
Only curative therapy (CBT),	10.2 (6)	22. 2 (4)	.18	.15
Combined therapy (supportive-curative)	84.5 (49)	50.0 (9)	.004	.32
Pharmacotherapy (yes), % (n)	67.8 (40)	44.4 (8)	.07	.20
Curative therapy (CBT), % (n)	93.2 (55)	72.2 (13)	.02	.28

Symptom severity test scores (instrument; range), mean (SD)

Table 1. Continued

Sociodemographic characteristics	Experimental group (n=59)	Control group (n=18)	P	95% CI/ Cramer's V
Depression (CES-D; 0-60)	35.9 (9.7)	36.5 (10.1)	.86	
Depression (BSI; 1-4)	2.42 (0.85)	2.81 (0.93)	.16	
Somatic symptoms (BSI; 1-4)	2.46 (0.86)	2.46 (1.21)	.99	
Anxiety (BSI; 1-4)	2.41 (0.95)	2.53 (1.09)	.72	
General psychological distress (BSI; 1-4)	2.21 (0.65)	2.49 (0.89)	.23	
Quality of life - WHOQOL-BREF scores (range), mean (SD)				
General facet (2-10)	4.36 (1.56)	4.73 (1.35)	.27	
Physical health (4-20)	9.0 (2.6)	8.8 (1.9)	.88	
Psychological health (4-20)	9.5 (2.5)	10.7 (1.7)	.12	
Social relationships (4-20)	11.6 (4.2)	10.2 (2.6)	.30	
Environment (4-20)	11.8 (2.9)	12.5 (2.0)	.51	

appendix A, we have described the mean values and effect sizes of the between-group comparisons on every subscale.

Treatment Adherence

Table 2 shows the figures regarding dropout. The groups did not differ significantly in dropout rate, which was 13.6% in the DCG versus 33.3% in the CG (small effect size; phi = .22). Controlling for relevant covariates in the logistic regression, patients in the CG were more likely to early terminate their treatment than patients in the DCG were (AOR = 52.06, *p* = .03). Also, higher Dutch-writing proficiency increased the likelihood of dropping out, whereas higher baseline depression severity decreased this likelihood. We did not find any significant differences between the two groups on the percentage of missed and no-show appointments for any of the treatment types (see appendix B).

Change in Primary and Secondary Clinical Outcomes

Primary outcome

Table 3 shows the ITT mixed model analyses for depressive symptoms (CES-D), which retrieved no group-by-time interaction, indicating that there was no difference in change of depression levels over time (*p* = .21) between the DCG and the CG. In the adjusted models, depression severity decreased in both groups over time (main time effect; β = -6.85; 95% CI [10.39, -3.31], *p* < .001), and patients in the DCG reported overall lower levels of depressive symptoms (main group effect; β = -13.63; 95% CI [-23.56, -3.70], *p* = .008). Regarding the level of depressive symptoms as measured by the BSI, only a main effect of time was found.

Table 2. Rate of Dropout and Stepwise Logistic Regression Predicting Dropout (N=66)

Treatment adherence	Experimental group (n=59)	Control group (n=18)	P	Cohen's d/ phi coefficient			
Dropout (yes), % (n)	13.6 (8)	33.3 (6)	.12	.22			

Model	Predictor	Model R²	B	S.E.	Wald	AOR	95% CI	P
0	Constant		-1.41	.31	20.62	.25		
1	Sex (female)	.18	.90	1.28	.49	2.47	.20 – 30.11	.48
	Ethnicity (Moroccan)		-.65	1.08	.361	.52	.06 – 4.35	.55
	Generation (second)		-3.37	1.87	3.27	.03	.001 – 1.33	.07
	age		-.05	.08	.50	.95	.82 – 1.1	.48
	Employment (employed)		-1.38	1.64	.71	.25	.01 – 6.23	.40
	Dutch writing proficiency		1.50	.57	6.91	4.49	1.47 – 13.78	.01
2	Depression severity at baseline (BSI)	.34*	-.36	.13	7.11	.70	.54 - .91	.01
3	Pharmacotherapy (yes)	.52*	-1.52	1.17	1.70	.22	.02 – 2.15	.19
	Combined treatment (supportive-curative)		-1.55	1.12	1.91	.21	.02 - 1.91	.17
4	Condition (control)	.62*	3.95	1.85	4.57	52.06	1.39 – 1955.17	.03

Note. *Significant model at p ≤ .05. Abbreviations: R^2= Nagelkerke R square; *B* = *B*-coefficient estimate; S.E. = standard error; AOR = adjusted odds ratio; CI = Confidence interval

There were no significant differences between groups concerning recovery rate. In the posttest, 13.6% of the DCG participants (n = 44 in posttest) were considered to have recovered (based on the <16 CES-D cut-off score) compared to 8.3% of the CG participants (n = 12 in posttest).

Exploratory analyses indicated that covariates sex and treatment duration appeared relevant for depression severity. Averaged across all time points, men in the DCG group showed lower scores on the CES-D than women (mean 25.5 vs. 32.9) whereas men showed higher scores than women did (mean 39.1 vs. 31.8) in the CG (group*sex effect; β = 14.68; 95% CI [2.39, 26.97], *p* = .02). Additionally, an increase in treatment duration was associated with higher overall BSI scores. Parameter estimates for all the non-adjusted and adjusted final models, including group, time, years of education, treatment duration, sex, medication type, and treatment type are presented in Appendix C.

Secondary outcomes

General psychopathology
We found no group-by-time interaction for the outcome variables anxiety, somatization, and psychological distress. In the non-adjusted and adjusted models, both groups improved over time on the three aspects. There was a significant main effect of group for psychological distress (β = -1.05; 95% CI [-1.77, -0.33], *p*=.005), indicating that patients in the DCG showed overall lower

Table 3. Study Primary 0utcome of Participants at Posttest[a] and Follow-up Including Between-group Effect Size (Cohen's *d*)

Outcome and group	Posttest[a]				3-month follow-up[b]			
	n	Mean (SD)/ % (n)	*p*[c]	Cohen's *d* [95% CI] / Phi coefficient[d]	n	Mean (SD)/ % (n)	*p*[c]	Cohen's *d* [95% CI] / Phi coefficient[d]
Depression (CES-D)								
Experimental group	44	29.50 (13.73)	.25	-0.42 [-0.95, 0.35]	8	25.47 (9.43)	.35	-0.57 [-1.30, 1.55]
Control group	12	35.27 (13.88)			3	34.33 (19.55)		
Depression recovery (≤ 16 CES-D)								
Experimental group	44	13.6% (6)	1.0	-.07	13	38.5% (5)	1.0	-.04
Control group	12	8.3% (1)			3	33.3% (1)		

Note. Abbreviations: SD = standard deviation; CI = confidence interval; IQR = interquartile range.
[a] Median time of measurement (IQR) = Experimental group: 9.64 (10.33); Control group: 16.12 (19.49). Between-group effect non-significant.
[b] Median time of measurement (IQR) = Experimental group: 18.53 (11.09); Control group: 13.77 (not available). Between-group effect non-significant.
[c] P value for effect of group in the model, controlling for time of measurement.
[d] Phi coefficient interpretation as size effect of chi-square = .10 small effect, .30 medium effect, .50-1.0 large effect.

levels of psychological distress. Exploratory analyses indicated that there was also a differential sex effect (group*sex; β = 0.95; 95% CI [0.06, 1.84], *p*=.04) on psychological distress. Women in the DCG group showed higher overall psychological distress scores than men (mean 2.1 vs. 1.5) whereas men in the CG reported higher overall psychological distress levels (mean 2.6 vs. 2.2). Female gender was also related to higher overall somatization levels, disregarding group (β = 0.66; 95% CI [0.17, 1.16], *p*=.009). Patients who received a combination of curative and supportive therapy showed lower overall somatization levels than patients that received only supportive treatment (β = -0.71; 95% CI [-1.41, -0.01], *p*=.047). Also, longer treatment duration in the DCG was associated with lower overall somatization level, compared to the CG (group*treatment duration; β = -0.05; 95% CI [-0.10, -0.004], *p* = .04).

Quality of life
Adjusting for covariates, patients in both groups improved on general quality of life (β = 0.51; 95% CI [0.07, 0.96], *p* = .02), and satisfaction with physical health (β = 1.12; 95% CI [0.42, 1.82], *p* =.002). However, the two groups differed with respect to the improvement over time in satisfaction with psychological health (group*time interaction; adjusted-model β = 2.17; 95% CI [0.10, 4.54], *p* = .04). Patients in the DCG reported an average increase over time of 1.3 points in their satisfaction with psychological health whereas patients in the CG reported an average decrease of 0.9 points in their satisfaction. There were no significant effects for group-by-time interaction, time, or group regarding the domains Social Relationships and Environment.

Exploratory analyses found that significant covariates predicting satisfaction with

psychological health were treatment duration, treatment type, and medication type. Longer treatment duration predicted lower satisfaction across all time points (β = -0.08; 95% CI [-0.14, -0.03], *p* =.002). Additionally, patients receiving a combination of curative and supportive therapy reported higher overall satisfaction levels than patients that received only supportive treatment (β = 2.10; 95% CI [0.34, 3.85], *p* =.02). Also, patients taking only antidepressants reported higher overall satisfaction with psychological health than patients using no psychotropic medication and patients using a combination of different psychotropic drugs (including or not antidepressants; β = 1.94; 95% CI [0.55, 3.33], *p* = .007).

Discussion

The current study aimed to examine the effectiveness of diversity-oriented competence training in terms of patient clinical and satisfaction outcomes after treatment. To do so, the outcomes of patients of trained therapists, who also received DC supervision, were compared with the outcomes of patients of therapists who were not trained and received neutral supervision. Against expectations, we did not find significant differences between groups regarding satisfaction with different facets of the treatment, or evaluation of their therapists' competencies. Nevertheless, patients in the control condition were more likely to drop out of treatment after controlling for other clinical and sociodemographic characteristics. Additionally, patients in both groups showed equal reduction of their depressive symptoms, as assessed by the CES-D and BSI, as did their levels of somatization, anxiety, and general psychopathology. General quality of life and satisfaction with physical health also improved equally in both groups. Patients in the DCG showed an increase of satisfaction with psychological health, whereas CG patients showed a decrease of satisfaction.

We could think of some reasons for the unexpected findings regarding satisfaction with the overall treatment and therapist competence. First, the two-day training and follow-up supervision meetings might have failed at permanently improving the therapists' diversity attitudes, skills, and knowledge, at least in a way that is clearly perceived by the patients. From the post training evaluation conducted on the therapist level, we know that therapists, even though they reported improved attitude and knowledge, encountered problems translating theory into practice and concrete behavior (Sempértegui et al., 2017). Therefore, the supervision meetings were organized around the therapist's struggles with real patients and aimed at providing concrete tools, but the intervention dose might still have been insufficient to substantially reinforce diversity competence. Another possibility is that the therapists in the CG also had a fair competence level, or that they consciously sought for developing their competences with these populations, as they were not blind to the study goals or their CG status (Hróbjartsson, Emanuelsson, Skou Thomsen, Hilden, & Brorson, 2014). Findings might also be related to instrument limitations to capture subtle differences in diversity-oriented competence or to the difficulty the patients expressed in explorative analyses to rate their therapists'

competence. Patients mostly spoke of a general feeling of confidence in the therapists' capabilities or awareness or lack thereof, which might not be specific enough to distinguish between above-average and average levels of diversity competence. Also, the method to calculate posttest satisfaction with the treatment and therapist competency (pooling data at differing time points) might have resulted in less accurate information.

Even though patients did not perceive differences between the treatments and the therapists' competence, the patients in the DCG reported an increase in satisfaction with psychological health, whereas the control patients' satisfaction decreased over time. Close inspection of the items conforming the "satisfaction with psychological health" subscale suggests that DCG patients showed an overall higher satisfaction with themselves, their bodies, enjoyed their lives more, were more able to concentrate, and experienced less symptom distress in the posttest than CG patients did. In other words, DCG patients holistically improved their psychological health. This might be reflective of the intersectional framework their therapists used targeting more aspects of individuals and in a larger context. There were indications from the effect sizes that DCG patients considered that their treatment goals were met to a greater extent than CG patients did, which could also explain the results. Greater satisfaction also appeared related to other variables besides the training group, namely treatment duration, treatment type, and medication type though the differential effect of the training group held after covariate adjustment. The decrease in satisfaction with psychological health that CG patients reported, although simultaneously reporting moderate satisfaction with treatment and showing symptom reduction, warrants further multilevel research. Possibly, inter-therapist effects might have played an especially salient role regarding this outcome (though it could also be relevant for other outcomes). As other authors found, some therapists produce better outcomes than others as a function of patients' ethnicity, which supports the emphasis on training (Hayes, Owen, & Bieschke, 2015; Imel et al., 2011). It could be the case that in the CG, more therapists were more in need of training to work with these specific populations than in the DCG, or that there were other individual factors that accounted for the differences. Unfortunately, we were not able to assess them or to add them to our statistical models.

We also found that the patients in the DCG were less likely to drop out during treatment than the patients in the CG were. This finding is in line with studies linking therapists' characteristics and better competencies to lower treatment dropout and nonadherence (Hooper et al., 2018; Owen, Imel, Adelson, & Rodolfa, 2012; Saxon, Barkham, Foster, & Parry, 2017) though none has studied if training therapists also contributed to this positive outcome. Another explanation for the lower dropout rate might be that DCG, more often than the CG, offered supportive therapies, such as case management and psychoeducation in addition to (and not instead of) mainstream treatments, which was discussed during DC training as a desirable adaptation for migrant patients. Lower dropout rates were also found in a study favoring CBT and case management above CBT alone for low-SES ethnic minority patients (Miranda, Azocar, Organista, Dwyer, & Areane, 2003). However, in this study, we did not find that a combination of CBT and supportive treatment was a significant predictor of dropout (vs. supportive only or

CBT only), which might be due to the small sample size. Higher acculturation (in terms of Dutch writing proficiency) and lower baseline depression severity appeared also relevant, which seems to indicate that patients with more social resources, needing the care less badly, terminate treatment early. It is unknown if termination was related to treatment dissatisfaction or to their treatment needs having been met earlier. In our study, underestimation of dropout rates and a positive effect of diversity competences on dropout may have played a role. We measured dropout during treatment (late dropout), whereas studies show that over 70% of dropout occurs after one or two visits during the intake assessment phase (Olfson, Mojtabai, Sampson, Hwang, & Kessler, 2009; Wells et al., 2013). Skillful management of diversity characteristics might be expected to be even more relevant to engage patients during the intake phase.

In this study, we did not find group differences in symptom change (general distress, depressive, anxiety, and somatization symptoms). This finding is in line with other research supporting general psychotherapeutic effectivity for depression (Cuijpers, 2017). It indicates that therapist diversity competence might be more relevant to engage ethnic minority patients and keep them in treatment, but once receiving evidence-based treatment, cultural differences seem to become less essential, and patients may benefit equally. Nevertheless, the posttest level depression and recovery rates of ethnic minorities in this study are low, even lower than natives' recovery rates in other studies (Blom et al., 2010; Sempértegui, Peerbooms, et al., In preparation), which highlights the importance of improving treatment techniques for this group too. Existing culturally-adapted, evidence-based treatments appear promising for many ethnic groups (Huey et al., 2014), although still not for the European-Turkish immigrant population (Renner & Berry, 2011; Ünlü Ince et al., 2013), indicating the desirability of further development of diversity sensitive approaches.

Limitations, Strengths, and Implications for Future Research

The results should be interpreted in light of the study limitations. First, the small sample size, especially of the CG, hampered factoring a therapist level or a random slope in the multilevel analyses. The small sample also likely resulted in too low statistical power to detect all but the largest effects. Therefore, in addition to the p-values, we reported the effect sizes and the 95% confidence intervals of the findings (Kramer & Rosenthal, 1999). Second, the quasi-experimental design lacked the advantages of patient randomization, even though it provided insights into the naturalistic clinical practice. Third, trial attrition and missing values were high; still we chose not to statistically impute data because of the high risk of unreliable results, and documented redundancy of this method when performing mixed-model analysis on longitudinal data (Twisk, de Boer, de Vente, & Heymans, 2013). Fourth, therapist competence was neither directly evaluated in clinical practice, other than through patients' evaluations, nor did we control for possible underlying mechanisms of the results such as lower dropout through better therapeutic alliance related to improved competencies (Lie et al., 2011). For these reasons, we cannot rule out that the findings could be accounted for by other factors than the DC training.

The strength of our study is its contribution to the still scarce body of evidence on diversity-

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oriented competence training in mental health care with findings stemming from the European, naturalistic practice in a secondary mental health care setting. This is also, to our knowledge, the first study evaluating patient-level outcomes in relationship to therapist training that incorporates the intersectional perspective to address diversity and competence targeting specific patient populations. Further research should replicate the current findings with larger control and native samples, also collecting information on dropout during intake phases and on reasons for treatment termination. Studies should also examine what optimal training methods and doses to achieve long-lasting development of diversity competence are, in such a way that this positively impacts patients and/or is perceived as such by patients, and that it positively influences the therapeutic interaction and treatment outcomes. Possibly, the answer to this question leads us to integrate intensive training in cultural, diversity, and intersectional thinking throughout undergraduate and Master's programs for mental health care professionals (Dogra et al., 2016). Furthermore, complementary to therapist competence, culturally-adapted, evidence-based treatments seem promising to achieve equity in mental health care for ethnic minority groups (Huey et al., 2014). Examining if a more rigorous integration of the intersectional approach leads to successful adapted treatments for Turkish and Moroccan migrant patients is necessary. Fortunately, the intersectional framework has been gaining or regaining coverage lately (López & Gadsden, 2016), also in methodological aspects (Clare R. Evans, Williams, Onnela, & Subramanian, 2017; Green et al., 2017), which will allow for improved versions of diversity training and treatment with a more comprehensive coverage of salient, intersecting aspects of diversity in the future.

Conclusion

Based on our results, we conclude that diversity-oriented competence training for therapists contributed to a higher overall patient satisfaction with psychological health after treatment, and to a lower probability of dropping out of treatment. There was no evidence that improving therapist diversity competence led to a greater symptom reduction among Turkish- and Moroccan-Dutch patients with depressive symptoms. Evidence-based treatments seemed adequate for these immigrant populations, under the condition that they get access to them and stay in treatment. Nevertheless, it is still necessary to improve therapeutic methods to increase recovery rates, including further intersectional tailoring to Turkish and Moroccan immigrant patients. Developing better training methods and providing students in mental health care with early and intensive instruction in diversity management might contribute to long-lasting therapist diversity competence that effectively reaches patients and enhances treatment outcomes.

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General discussion

This dissertation contains the outcomes pertaining to two main goals. First, my colleagues and I wanted to gain better insight into the mental health status of Turkish and Moroccan immigrant groups in Europe, specifically with respect to depressive disorders and the symptoms thereof (i.e., prevalence, correlates, symptom manifestation), and to better understand the treatment possibilities and their effectiveness at treating depression (see Chapters 2, 3, and 4). Second, we sought to elucidate whether the development and implementation of diversity-oriented competence training for mental health professionals, framed by the intersectionality theory, contributed to improved mental health care for Turkish and Moroccan immigrant and ethnic groups suffering from depression in the Netherlands (see Chapters 5 and 6).

In this final chapter, I first summarize and interpret the main findings. Second, I reflect on the strengths and limitations of our research and on the challenges that my colleagues and I faced in conducting this project. Finally, I discuss the possible implications of our findings for theory, policy, and clinical practice and conclude with recommendations to advance future research on immigrant and ethnic minorities, intersectionality, and clinical diversity competence (training).

Representation of Turkish and Moroccan Immigrant Populations in European Mental Health Research

Chapters 2 and 3 contain the findings of the two systematic reviews that my colleagues and I conducted in order to determine the state of the art regarding depression in Turkish and Moroccan immigrant groups and the mental health care provided to them in Europe. Our findings show that the inclusion of Turkish and Moroccan immigrants as a focus group in European clinical research on depression and mental health, in general, is limited. Turkish and Moroccan populations are among the largest immigrant groups in 14 European countries, yet the only peer-reviewed studies that included them originated only from Belgium, Austria, and Sweden, but mostly from Germany and the Netherlands. We also encountered mainly moderate-to-low quality (and highly heterogeneous) studies that used various instruments, samples, and methods to examine the prevalence, correlates, symptoms, and treatment outcomes. Furthermore, there were few studies examining Moroccan populations (almost twice as many studies focused on the Turkish population), which rendered the findings concerning the Moroccan group less reliable and also meant that there were still many knowledge gaps regarding this immigrant group.

The manner in which we conducted our search for relevant articles could explain the small range of countries conducting research on Turkish and Moroccan immigrant groups; however, we took care to include all available study languages across the largest and most widespread scientific platforms. So, we are confident that we captured the vast majority of high quality, peer-reviewed studies. The small range of countries might instead reflect a European trend (more particular to some countries than others) of allocating few resources to research about ethnic minorities and Moroccan immigrants (Rechel et al., 2013) and the effectiveness of existing psychotherapies in general (Lemmens, 2015). Another possible

explanation might be that ethnic minority patients and other socially disadvantaged groups are often a hard-to-reach subgroup, making it difficult for researchers to involve them in research (Bonevski et al., 2014).

How Prevalent Are Depressive Disorders in Turkish and Moroccan European Immigrant Populations?

A consistent finding of our systematic review was that Turkish groups, patients, and individuals of the general population reported a three-to-four times higher prevalence of depressive disorders compared to native populations. With a pooled 1-month prevalence of 16.6% [14.2–19.3%], Turkish immigrant populations in Europe bear one of the highest depression rates worldwide (Kessler & Bromet, 2013; Topuzoglu et al., 2015) —the strongest evidence pointing towards Turkish–Dutch and Turkish–Germans, older adults, women, and first-generation individuals. These percentages are even higher than the depression rates of the Turkish population in Turkey (Topuzoglu et al., 2015) and other immigrant groups in Europe, including individuals from Morocco (not including refugees or asylum-seekers).

The Moroccan samples we examined in our review displayed a pooled 1-month prevalence of 6.1% (95% CI: 4.4-8.4) that in most cases did not differ from that of native populations (4.7% (95% CI: 3.5-6.2%)). Also, the 1-year and lifetime rates of depression among Moroccan-Dutch individuals was lower compared to native participants. However, there were some vulnerable Moroccan immigrant populations including older Moroccan–Dutch adults and Moroccan–Belgian adults, whose rates of depression were higher than those of the native populations. Considering the lower prevalence of depression reported among Moroccan immigrants, also compared to citizens living in Morocco (Kadri et al., 2010; Oneib et al., 2015), the Moroccan–Dutch population seemed to be a more resilient immigrant group—at least with respect to depressive disorders. Nevertheless, studies have shown that Moroccan immigrants suffer from a higher prevalence of psychotic disorders (Bourque et al., 2011; Veling et al., 2006). Studies also suggest that some of that prevalence could be explained by an underdetection of mood symptoms (and maybe depressive disorders; Veling et al., 2007; Zandi et al., 2016). Further understanding of the interrelationship and the comorbidity of psychotic and affective disorders in the Moroccan groups is warranted.

Fassaert and colleagues (2009) cautioned against overestimating the prevalence rates of immigrant populations, in particular of Turkish groups. In their study of the instrument K10, which measures psychological distress, Fassaert et al. (2009) found that the cut-off to determine caseness was higher for Turkish and Moroccan participants than it was for native Dutch participants. (We did not include this study in our review because the instrument uses a combination of depression and anxiety disorders.) However, a more recent study (published after we conducted our review) found measurement invariance for the PHQ-9 (an instrument that measures depressive symptoms) across different ethnic groups, including Turkish, Moroccan, and native Dutch individuals (Galenkamp, Stronks, Snijder, & Derks, 2017). Wind et al. (2017) also recently found measurement invariance for the Hopkins Symptom Checklist-25

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to assess anxiety and depression among several non-Western linguistic groups. These findings corroborate the reliability of the aforementioned prevalence rates and the importance of considering ethnic- and migration-related factors associated with depressive symptoms (Galenkamp et al., 2017). Future research should extend the available knowledge on idioms of distress to improve the ecological validity of depression measures. Also, high quality epidemiological studies that provide clear data on incidence, prevalence, access to primary health care, and access to secondary health care are still very much needed in most European countries (Kluge et al., 2012).

The Symptoms of Depression

In general, referring to the standard DSM classification of depressive symptoms, the systematic reviews (see Chapter 2, 3) revealed that Turkish and Moroccan immigrant populations, as well as natives, reported affective, vegetative and somatic symptoms related to depression. This finding is consistent with the growing body of literature showing that both affective and somatic complaints are common to depression across all ethnic groups worldwide (Haroz et al., 2016; Shidhaye, Mendenhall, Sumathipala, Sumathipala, & Patel, 2013). Nevertheless, the level of psychopathology in general, and the portion of people considering suicide were often higher among the immigrant groups. Also, somatic symptoms were more broadly reported by Turkish and Moroccan groups and were more intertwined with the mood symptoms compared to the natives. Additionally, anxiety symptoms were often reported by Turkish populations with depression, which is in line with studies showing strong associations between anxiety and depressive, and somatoform (now somatic symptom) disorders (Kessler et al., 2009; Shidhaye et al., 2013).

Our reviews retrieved only a few qualitative studies examining idioms of distress, concerning almost exclusively Turkish, female patients. These studies revealed idioms of distress commonly reported by patients with depression, but not included in depression measures based on standard classification systems. Examples were pain, dizziness, irritability, feeling of tightness, hallucinations, or other idioms without direct translation from Turkish such as "black feeling". Findings showed that embarrassment also influenced the written or verbal report of symptoms in these immigrant samples. Somatic symptoms were most commonly mentioned when patients were asked directly, whereas psychological symptoms were related to fear of being stigmatized. Despite the considerable amount of studies retrieved regarding symptom manifestations, much research is still needed to corroborate the mentioned symptom profile of Moroccan immigrant groups. Also, culture-bound symptoms still need to be further explored.

The Correlates of Depression Severity and Therapeutic Success

With Chapter 2 and 3, we also aimed to shed light on the psychological individual factors and aspects of diversity that are correlates of depression symptomatology and positive treatment outcomes. In other words, we examined the factors that were statistically positively or negatively associated with depressive symptoms. We found that most studies examined aspects of diversity

and migration-related variables, very few provided insight into individual psychological aspects, and none addressed environmental, or organizational factors. Salient group-specific factors associated with lower depression severity were (ethnic-matched) social support, a lower orientation towards the original culture, and a higher orientation towards the receiving culture (lower 'maintenance' and higher 'participation' acculturation strategies, respectively) in Turkish samples. Acculturation strategy did not appear related to depression in Moroccan samples, but religiousness was related to lower depression severity. For both immigrant groups, perceived ethnic discrimination, and belonging to the Turkish- or Moroccan ethnic groups was in the majority of the studies (also controlling for other variables) predictive of higher levels of depressive symptoms.

Unexpectedly, there was, in the examined groups, no strong evidence for the relationship of depression severity with known correlates of depression, such as female sex/gender, low SES, younger age, and single marital status (e.g., Kessler & Bromet, 2013; Richards et al., 2016; WHO, 2014). As discussed in Chapter 2, the methodological limitations of the retrieved studies might be explanative of this finding, since most studies lacked the statistical power to examine intersectional (interaction/ moderation) effects that were possibly relevant to smaller groups within the populations. For instance, marital status did not appear related to depressive symptoms across the general adult Moroccan population, but being single or living alone did appear positively associated with depressive symptoms among older Moroccan community individuals. Also, the single effect of some diversity variables (e.g., SES) may have been "canceled out" in some analyses due to the high proportion of explained variance that was shared by all the examined variables (e.g., SES, education, migration generation significantly explained variance as a block, but none of these variables was significant individually).

The studies examining individual psychological and diversity factors associated with treatment outcomes were scarce and still inconclusive. Reviewed studies found some evidence showing that worse social and psychological start conditions (e.g., low SES, high baseline symptom levels) predicted worse treatment outcomes for Turkish and Moroccan groups. On the other hand, a participatory acculturation strategy, younger age and longer stay in the receiving society predicted better treatment outcomes. Our naturalistic effectiveness study (see Chapter 4) found that education and employment were negatively related to overall levels of psychological distress. Nevertheless, we found that none of the controlled diversity variables (age, sex, marital status, employment, education) appeared related to the change over time in depressive symptoms, psychological distress or quality of life, which might have been due to low statistical power to test interactions. Nonetheless, across the studies, there is a trend pointing out the relevance of several aspects of diversity (besides or in interaction with ethnicity) for determining the psychological baseline level and outcomes of treatment for depression. More in-depth study of these correlates in relation to additional aspects of diversity is warranted to achieve the main goals of personalized mental health care (i.e., identifing characteristics that reliably predict the best care interventions for each individual; Simon & Perlis, 2010).

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What is the Status of the Access to Mental Health Care, its Use, and its Quality?

Few, mostly low to moderate quality studies examined the proportion of the (general) population that accesses mental health care services. There was some evidence from Germany, that the studied groups, especially young Turkish women (Zollmann et al., 2016) were increasingly finding their ways to mental health care in the last years. Some authors (Fassaert, Nielen, et al., 2010; Schouler-Ocak et al., 2010) suggested that the increased efforts to cover the costs of mental health care and to adapt the care to offer culture-sensitive programs (sometimes in the native-tongue) have facilitated this upward trend.

Obstacles that still seemed to impede the access to care among the groups under study were fear of stigmatization and limited knowledge of the mental health care system, especially among (Turkish) people of the first generation and among those second-generation individuals who reported a high orientation towards the original culture ('maintenance' acculturation strategy). Self-reliance and pessimism about the care they could get were also considered obstacles.

Even though there were indications of improved access to mental health care of Turkish patients in recent years (Schouler-Ocak et al., 2010; Zollmann et al., 2016), there still seemed to be inequities in the characteristics, use, and quality of primary, secondary and tertiary care offered to Turkish and Moroccan populations. Reviewed studies found indications that Turkish and Moroccan groups (especially certain subgroups in terms of gender, marital status, etc.) received primary care deviant from guidelines regarding psychotropic medication; or delayed, shorter, less intense secondary and tertiary care. Also, Turkish patients reported that their treatment needs were less often met compared to natives, and Turkish and Moroccan patients dropped out of treatment more often, which was partly explained by the higher prevalence and severity of depression symptoms. Accordingly, one recent German study (Zollmann et al., 2016) showed that equal treatment is not necessarily the solution to inequities either, as Turkish patients that received the same treatment duration and content as natives, still reported less positive treatment results. Also, our naturalistic study (see Chapter 4) showed that Turkish and Moroccan patients dropped out more often from standard IPT than native Dutch patients did. These were indications that the treatment for depression and depressive symptoms for Turkish- and Moroccan patients might still benefit from attunement to these specific groups, as it was the case with the accessibility to mental health care.

What is the Treatment Effectiveness of Culturally Adapted Therapies?

Our theoretical reviews revealed that one of the largest gaps in the literature concerned the treatment effectivity of available evidence-based treatments for depression. We found no studies examining the effectivity of depression treatment in Moroccan immigrant groups, and only a few moderate to low-quality studies (of which three RCTs) examining the treatment outcomes in Turkish immigrant populations. From the RCTs we learned that culturally- congruent self-help groups, or online culturally adapted problem-solving therapy, was not more effective than wait-list was to reduce depressive symptoms at posttest of Turkish immigrant samples. However,

the studies were hampered by small sample sizes and high attrition rates. Additionally, a third, German RCT conducted among Turkish patients with depressive and psychosomatic complaints, showed that including bioenergetic exercises (targeting body perception and emotional expression) in culturally adapted psychosomatic rehabilitation was more effective to reduce depressive and other types of symptoms than the culturally adapted psychosomatic rehabilitation program alone was. Psychosomatic rehabilitation programs, encompassing different individual and group therapies (not all of them evidence-based), often in the patients' mother tongue, were common practice in Germany and appeared variedly effective in low-quality studies to reduce depressive and general psychopathology of Turkish inpatients.

The lack of effectiveness of culturally adapted evidence-based therapy for these groups is surprising and contrasts sharply with the findings of effective adapted therapies for other ethnic groups (e.g., Hall, Ibaraki, Huang, Marti, & Stice, 2016; Huey et al., 2014). The findings on effectiveness might be indicative of the need for other types of cultural adaptation or evidence-based therapies for Turkish (and also probably Moroccan) immigrant groups. Most of the culturally adapted therapies that have been studied, used a top-down adaptation approach that stressed the fidelity of standard therapies and focused less, or only superficially (language, ethnic-match, ethnic-relatable pictures and examples) on the fit to the target group. Perhaps, as some authors have suggested (Hall et al., 2016), Turkish and Moroccan groups might benefit from bottom-up adaptation models that first examine the group-specific characteristics and contextual information that influence mental health, and subsequently develop therapies that fit the group-specific characteristics and needs.

What is the Treatment Effectiveness of Evidence-Based Therapies for these Groups?

Regarding standard evidence-based therapies, our systematic review yielded only one RCT study, which found that group CBT was no better than a wait-list condition in reducing depressive symptoms of Turkish-Austrian patients. To expand the knowledge on the effectivity of standard evidence-based therapies offered to Turkish and Moroccan populations, we conducted a naturalistic, retrospective, pilot study (Chapter 4) comparing Turkish- and Moroccan-Dutch to native Dutch patients receiving two of the currently most applied evidence-based therapies for depression, namely IPT and CBT. Although we sought to fill in the gap of knowledge on treatment effectiveness for Moroccan groups, we came across some challenges that hindered our purpose to examine Turkish and Moroccan patients separately. First of all, the routine outcome measure (ROM) was still not thoroughly implemented and many patients missed information on their measures if any was available. Second, 32.4% of the files did not include information on important variables for our purpose, such as the patients' ethnicity. Third, a much higher proportion of Turkish- and Moroccan- Dutch patients than of the comparison group, native Dutch patients, received only pharmacotherapy, so the pool of patients receiving psychotherapy, especially IPT, was smaller. The question remained whether this different pattern of care provision reflected the patients' own preferences, choice or need, or whether it resulted from therapists' judgments or beliefs about what treatment works best

for ethnic minority patients, or from the fact that those not proficient in Dutch were assigned to pharmacotherapy (notice that mental health care institutions do not provide bilingual treatment nor interpreter services).

In our study, we found that, for patients who did receive IPT or CBT, and stayed in treatment, both therapies were equally effective to reduce depressive symptoms disregarding the patient's ethnicity. Still, we found evidence that IPT worked better than CBT in reducing psychological distress, regardless of ethnic group. These findings only partially supported the currently prevailing idea that the available standard evidence-based psychotherapies are, without adaptation, equally effective in treating depression (Cuijpers, 2017), also among immigrant and ethnic minorities (Ünlü Ince, Riper, et al., 2014). Additionally, we found effectiveness disparities regarding other aspects besides symptom severity. Importantly, we found that Turkish and Moroccan groups dropped more often out of IPT (33.3% and 41.7%, respectively) than their native counterparts (6%), which did not happen in CBT (dropout rates ranged between 10.5% and 14.7% across the three ethnic groups). The dropout rates found in our study were similar to the rates found in an earlier study of IPT in the Netherlands (Blom et al., 2010), and highlighted the importance of efforts to increase the adherence of ethnic minority patients to therapy. In our outpatient sample, we found that, besides ethnicity, younger age and higher baseline psychological distress were predictive of higher dropout of IPT. The latter could shed some light on the higher dropout of IPT among ethnic minority patients, since they also reported higher baseline psychological distress than natives, and the presence of diverse comorbid symptoms have been found to predict a better effectivity of CBT compared to IPT (Bernecker et al., 2017; Huibers et al., 2015). Furthermore, ethnicity appeared importantly related to the patients' outcomes in quality of life. Turkish-Dutch and Turkish- and Moroccan-Dutch patients together reported lower quality of life at posttest than native Dutch, which appeared partially accounted for by other diversity features. Also, Turkish- and Moroccan-Dutch patients showed consistently higher symptom levels (at pre- and posttest) than native Dutch.

It is worth mentioning that the effectiveness of depression treatments in general still needs improvement. According to Cuijpers and colleagues (Cuijpers & Cristea Ioana, 2015; Cuijpers et al., 2014), psychotherapy only offers 14% added value to the 40% recovery rate seen when patients follow the natural course of the illness. Also, as we found in our study (Chapter 4), treatment satisfaction seems to be rather low across all ethnic groups. Further trials should focus on mechanisms to improve recovery rate, functioning, and satisfaction with treatment, emphasizing the importance of including representative immigrant and ethnic minority populations in the process.

Intersectionality and Diversity of Turkish and Moroccan Immigrant Populations

Across Chapters 2 to 4 we found evidence supporting the adoption of an intersectional framework for conducting research on (in-) equity in mental health care. We found that Turkish and Moroccan ethnic background was an important independent predictor of depression, but we also found many examples of other diversity aspects interacting with ethnicity in relationship

to depression severity, care needs, and treatment outcomes, obstacles, and facilitators. To name some examples, Moroccan, male, young immigrants perceived high levels of discrimination (compared to other ethnicities and women), which was greatly predictive of depressive symptoms. Also, especially older Turkish and Moroccan adults presented a very high prevalence of depressive disorders and reported fear of stigmatization. Additionally, low socioeconomic position and higher symptom severity of Turkish patients were related to lower treatment outcomes and less congruency between needed and received care. Another example was that Turkish, first-generation, low SES women found it helpful to talk about some specific daily life challenges they encountered, such as feelings of isolation, difficulties in their household, marriage, educating their children, and socializing with their family. Furthermore, in our study, we found that younger age, lower Global Assessment of Functioning (GAF) score, higher baseline symptom severity, and Turkish- and Moroccan-Dutch ethnicity were associated with a higher dropout of IPT.

The conclusions on intersectionality were mostly drawn based on the examination of specific samples, covariates, and samples that were stratified by ethnicity, age, and gender. There were very few studies that examined moderation models or interaction effects testing whether other diversity aspects were related to the relationship between ethnicity and depression. It is advisable that researchers focus more on the intersecting effects, and effects specific to subgroups, rather than only on the predictive value of single variables. This practice would increase the ecological validity of their findings and facilitate the use of scientific insights in clinical practice, which would also promote a more personalized and social-just mental health care (López & Gadsden, 2016).

Does Diversity-Oriented Competence Training Contribute to Improved Mental Health Care for Turkish and Moroccan Immigrants with Depression?

In Chapters 5 and 6 we elaborated on the development, implementation, and effectiveness of diversity-oriented competence training for mental health professionals, working specifically with Turkish- and Moroccan-Dutch patients with depressive symptoms. Besides testing the improvement of therapist competence after following the training, by comparing them to therapists who did not receive training, we also conducted a prospective, controlled, quasi-experiment to examine whether patients of trained therapists displayed a greater satisfaction with the treatment and clinical improvement after treatment than patients of control therapists.

In Chapter 5, we focused on the development of the diversity-oriented training, which sought to encompass the intersectionality framework of diversity, with population-specific, and disorder-specific content, namely Turkish and Moroccan immigrant populations with depressive disorders. To briefly recapitulate, the intersectionality framework was offered as the principal analytical tool for clinicians to evaluate themselves (as professionals), their patients, and their therapeutic interaction considering the social context and the impact of their social identity and position, defined by the interplay of aspects of diversity (López & Gadsden, 2016; Sears, 2012; Sempértegui et al., 2017). The population-specific component referred to the ethnocultural

and social aspects of the Turkish and Moroccan groups such as the history of labor-migration, social development, and struggles in the receiving societies (that were possibly relevant for their mental health status; Sempértegui et al., 2017). The disorder-specific aspect of the training offered insight into guidelines and evidence-informed practices to properly assess, diagnose and treat depressive disorders and symptoms among Turkish and Moroccan immigrant groups (Sempértegui et al., 2017).

At this point, it is worth drawing attention to the name of the training, which is ´diversity-oriented competence training´ and not ´diversity training´. The training was developed in the midst of a field's transition from a narrow perspective of cultural competence, focused mainly on ethnocultural aspects or individual, separate aspects of diversity, to broad diversity competence encompassing a greater variety of dynamically, intersecting aspects of diversity, conferring the same weight to all aspects, and taking social power dynamics into account. We consciously chose the name 'diversity-oriented training' to acknowledge this transition phase, and the resulting hybrid training, combining elements of both current of thoughts, partly due to the limited number of guidelines and research findings integrating intersectionality for Turkish and Moroccan groups. In the future, with methodological advances in the field, we should also be able to cover contextual and power dynamic aspects related to intersecting aspects of diversity and mental disorders. Further research should elucidate whether population- and disorder-specific components are of added value, or whether a general diversity-oriented competence training could serve all individuals.

Our study found that therapists that received diversity-oriented competence training showed better scores than control therapists on the self-reported measures of attitude- awareness, knowledge, and total diversity competence at post-training. The post-training scores on the knowledge test that we used as a more objective measure of competence were also higher in the quasi-experimental condition than in the control condition. There was no reported improvement in self-reported skills, which according to the therapists' feedback might be related to the strongly theory-driven training, and the short duration of it. After three months, we found that the gains in self-reported competence remained stable, whereas the scores on the knowledge test dropped to nearly baseline levels. Although the honest answers regarding skills supported the validity of the therapists' answers indicating a stable (3-month) competence improvement, we cannot be totally certain that the results were not rather the product of social desirability. The knowledge test was used as an objective measure of competence besides self-report instruments; however, better tools to measure therapist intersectional diversity competence objectively are desirable for future training evaluations.

Given the importance of continuous training, diversity-oriented competence training was followed by group supervision follow-up sessions every three months. During this time, we gathered and compared the treatment outcomes of the patients of the therapists in both the diversity-oriented competence group (DCG) and the control group (CG). Our study yielded some unexpected results. In contrast to most studies evaluating competence training, DCG patients in our study neither reported higher treatment satisfaction nor evaluated their therapists as

more competent than CG patients. Nevertheless, we found that DCG patients were less likely to drop out of treatment than CG patients and that DCG patients were also more satisfied with their psychological health at posttest, whereas CG patients showed a decrease in their satisfaction. These findings seemed to indicate that superior treatment satisfaction or perceived therapist competence is not a necessary condition for patients to still benefit from their therapists' training. As we discussed in Chapter 6, controlling for other variables helped us to partially understand why CG patients' satisfaction with mental health decreased, whereas DCG patients' satisfaction increased. For instance, we found that an increase in satisfaction with mental health was related to receiving a combination of curative and supportive treatments, which DCG patients received more often than CG patients. However, the group effect remained when we controlled for this and other variables, indicating that other aspects not measured or controlled for in this study might be related to the findings.

Additionally, we found that the DCG patients were similar to CG patients in symptom severity. Adjusting for covariates, both groups of patients showed an equally significant decrease of depressive, anxiety and somatization symptoms and general distress. Both groups also improved equally in general quality of life and satisfaction with physical health, but they did not improve their satisfaction with their social relationships or environment. The findings indicate the need for additional strategies to improve functional outcomes besides symptom reduction. Until now very little is known about interventions that improve functional outcomes of patients with depressive symptoms, especially those of ethnic minorities (Lam et al., 2015).

Summing up, we found evidence that diversity-oriented training was related to some improvements in the mental health care for Turkish and Moroccan immigrant populations in the Netherlands. The training was well received by the therapists, and their patients reported better satisfaction with their psychological health at posttest and lower likelihood of dropping out of treatment than control patients. We did not find evidence indicating that the training was associated with better outcomes regarding depressive, anxiety, somatization symptoms or general psychological distress, but DCG patients were more satisfied than CG patients with their psychological health at posttest. Both groups seemed to equally benefit from the offered treatments; however, the recovery rates were still worryingly low. Diversity-oriented competence training appeared more relevant for keeping patients in treatment, which is a result that should not be disdained given that dropout is a common problem in mental health (Olfson et al., 2009; Wells et al., 2013), more often present in ethnically diverse samples (Cooper & Conklin, 2015), and which is also related to poor treatment outcomes and future relapse (Barrett et al., 2008; Melartin et al., 2005).

Strengths
Aside from evaluating the individual studies that we have discussed earlier, we can elaborate on some strengths of this dissertation as a whole.

First of all, our studies represented one of the first attempts to elucidate the effectivity of therapists' training in diversity competence (earlier cultural competence) to improve the

treatment outcomes of immigrant populations. At the time we started working on this project, there was a severe lack of studies examining the link between competence training (and improvement of therapist competence) and actual treatment outcomes of patients. Most of the available literature had focused only on the effect of training in terms of therapists' results. We extended the available literature by prospectively investigating the relationship between competence training of therapists and the clinical outcomes at the patient level.

Additionally, to the best of our knowledge, our studies were also the first to integrate the intersectional framework into competence training, the daily clinical practice and the evaluation of both. Intersectionality provides a more socially-accurate framework for therapists to examine their identity, the influence of their own diversity aspects on the therapeutic alliance, and the patients' illness models and needs stemming from their interrelated aspects of diversity, determining their social position (López & Gadsden, 2016; Sears, 2012; Sempértegui et al., 2017). In our studies, we found that several aspects of diversity were interrelated and associated with depressive symptoms of Turkish and Moroccan immigrant populations, even though we still need more advanced methods to validate these findings.

Furthermore, this dissertation presented two large, systematic reviews that covered a wide range of topics relevant to the diagnostics and treatment of depressive symptoms among two large immigrant communities in Europe, namely Turkish- and Moroccan populations. We contributed to the field by providing an overall picture of what is relevant for working with these populations, synthesizing current evidence-informed clinical practices, and pointing out at the still existing knowledge gaps. We also added to the work of other authors (e.g.,van Els & Knipscheer, 2015) who have elaborated on this topic from their clinical observation and experience, which are also valuable indications of what should be tested next in research settings. It would be valuable to join these two bodies of knowledge to enrich and improve the content of the diversity-oriented training and adaptations of evidence-based therapies and mental health care for Turkish- and Moroccan populations.

Finally, in this dissertation, we studied Turkish- and Moroccan-Dutch clinical samples receiving outpatient treatment in naturalistic settings, which is an important addition to the knowledge gathered in RCTs and other observational studies regarding the effectiveness of depression treatment and the relevance of therapists' (cultural) competence and training. RCTs results have often the drawback that they are based on samples that exclude illiterate patients, patients who are not proficient in the therapy language, or ethnic or immigrant populations (Horrell, 2008). RCTs also do not often consider the possible moderating effect of ethnicity in cases in which these populations have been included (Hall et al., 2016). Additionally, samples of recent observational studies on the importance of cultural competence have mostly comprised populations with relatively uncomplicated psychopathology, such as young, highly-educated, college students with subclinical start depression, anxiety, academic and relationship concerns (Hayes et al., 2015; Hooper et al., 2018; Imel et al., 2011). Our studies contributed to the extant literature by examining the effectivity of competence training for immigrant samples representative of immigrant populations prevailing in daily clinical practice: with severe (initial)

psychopathology and facing social hardship, such as unemployment, and low education. Moreover, we examined, whenever possible, the (moderating) effect of ethnicity for the outcomes of the most common therapies for depressive disorders and symptoms.

Limitations

Besides the limitations of each study that have already been mentioned in each chapter, this dissertation has some limitations that need to be acknowledged.

First of all, our empirical studies and a great part of the studies included in our systematic reviews failed to examine large enough samples to sustain strong, reliable conclusions. In our case, the small sample sizes of Turkish and Moroccan patients in Chapter 4, of participating therapists in Chapter 5, and of control patients in Chapter 6 implied that we could not consider the clustered character of the data in the statistical analyses; e. g., we could not add a therapist- and a team level to our model comparing IPT and CBT for the different ethnicities (see Chapter 4). Neither we could examine (nor control for) the effects of different institutions, teams, and therapist characteristics (see Chapters 5 and 6). Additionally, our naturalistic samples were small, which implies that our findings should be interpreted and generalized with caution to other Turkish and Moroccan populations, as they represent the results of a limited proportion of the general population and the outpatients receiving mental health care in the secondary setting in the Netherlands.

A second limitation was the narrow focus of our work, principally concerning depressive disorders and symptoms. In hindsight, this focus allowed us to study this topic more thoroughly, paying attention to intersectional relationships across variables, keeping an already complex topic as simple as possible. And we also already included samples with high comorbid depression and somatic-symptom disorders. However, the literature increasingly shows the commonalities (e.g., in etiology, neural processes) between depressive, anxiety and other disorders (in Newby, 2015), the close relationship between psychotic and mood symptoms in Moroccan populations (Zandi et al., 2016), and the discussed findings showing a combined symptom depression profile in Turkish and Moroccan immigrant groups. Our reviews and studies could have benefitted from a broader transdiagnostic and network perspective (Newby, McKinnon, Kuyken, Gilbody, & Dalgleish, 2015) to increase the ecological validity of the findings and to include other studies that might be relevant for the treatment of depression in our study populations.

A third limitation was related to the deficient cross-cultural validation of most of the depression instruments used by the studies included in the reviews and by our own studies. Even though some of these instruments (e.g., CES-D, BDI, HARSD) have proven reliability in non-English samples (Fields, 2010), only few of them have been examined with confirmatory factor analyses to inspect their structure in other populations than the original, almost always Western sample (Fields, 2010). Dutch researchers have greatly contributed to the available information on the cross-cultural validity of instruments such as the CIDI (Smits et al., 2005), the CES-D (Spijker et al., 2004), and, most recently, the PHQ-9 (Galenkamp et al., 2017) for Turkish

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and Moroccan immigrant samples. Nevertheless, the cross-validation of depression measures across other European countries and immigrant samples should be placed in the research agenda.

Other important limitations concerned our evaluation of diversity-oriented training for clinicians working with Turkish- and Moroccan-Dutch patients. First, we lacked another ethnic group to operate as a control group for the Turkish- and Moroccan-Dutch patients with depressive symptoms in our study. Such group would have made possible to test whether the addition of knowledge modules on the specific ethnocultural aspects and disorder-specific characteristics of these populations were of added value. Maybe, offering tools to integrate a strictly intersectional framework in clinical practice (which means that all aspects of diversity are equally considered as potentially relevant in defining a person's reality and health) might offer enough holding for working with any patient, including immigrant or other marginalized populations.

Second, the novelty of the specific approach we chose for the training (group-specific, disorder-specific, integrating intersectionality) meant that the measures for cultural competence then available were not suitable for our purposes. Therefore, necessarily, we used self-developed instruments to measure group-specific diversity competence as perceived by the therapists and the patients. At the moment we have gained insight into the reliability properties of these instruments, but we have not yet performed psychometric studies testing the construct and ecological validity of these measures.

Third, although the diversity-oriented competence training sought to improve therapist basic competencies (attitude and awareness, knowledge, and skills) for treating Turkish and Moroccan patients with depression, we did not standardize the therapeutic approaches. Therefore, we still face a black box regarding the mechanisms through which increased therapist competence could have led to improved patient treatment adherence and satisfaction with psychological health. For example, were the therapists more prone to discuss specific social or diversity issues during the sessions? Did they provide more psycho-education because low mental health literacy is a known treatment barrier in these groups? Or did they more often add case management to the treatment because of the awareness that social hardship might be a drawback for the patients' well-being? Future research might be improved by a study design examining an observable and measurable operationalization of diversity competence.

Finally, our approach developing the training was strongly focused on cognitions. We based the training content on the existing evidence on the needs and challenges of therapists, the characteristics of depression symptoms and treatment of Turkish and Moroccan groups, and on therapist competence and intersectionality of diversity aspects. Yet this approach might have been at the expense of the opportunities to develop necessary skills. In the future, training could benefit from including more experiential and practical exercises and from tailoring the training content to the specific needs of the therapists to be trained. Integrating the patients' perspective on their needs and expectations would also be a valuable addition.

Implications and Recommendations

In this section, I reflect on the possible implications for clinical practice, training and education, and policy of the studies presented in this dissertation. Additionally, I formulate recommendations for future research.

Implications for clinical practice

Based on the reviews presented in Chapters 2 and 3, we formulated evidence-informed advice for clinicians working with Turkish and Moroccan immigrant patients with depression. Regarding diagnostic practices, one of the most important take-home messages was to be alert to the high prevalence of depression among Turkish immigrant groups, and of certain Moroccan populations, like older adults or men. Also, awareness is advisable of the fact that depression in these groups might be manifested in forms that are less well covered by standard classification systems or depression instruments. There were reports of specific idioms of distress, irritability, hallucinations, high presentation of somatic symptoms, and high comorbidity with somatic-symptom, posttraumatic stress, and anxiety disorders. Therefore, using instruments about which there is cross-cultural information available for the groups under study (e.g., CES-D, CIDI, PHQ-9), together with clinical interviews assessing the person and his/her context, might be good practices.

Concerning the treatment phase, the conducted studies revealed few, weak, or equivocal evidence regarding the effectiveness of treatments to reduce depressive symptoms for Turkish or Moroccan populations. Formulating a clear advice about the best therapy for these groups is not yet possible since both culturally adapted or standard evidence-based treatments showed limitations for these populations. The examined therapies were not superior to control lists, were related to small symptom recovery or were less well accepted by ethnic minority populations (e.g., IPT). Also, only one study showed that bioenergetic exercises (targeting body perception and emotional expression) might be of added value to standard therapy for Turkish groups. However, addressing how patients cope with discrimination, social disadvantages, fear of stigmatization because of mental illness, acculturation styles, and using sources of resiliency, such as social support or religiosity, were intersectional- and evidence-informed therapeutic interventions that could be added to depression treatment.

In order to facilitate treatment continuation of Turkish- and Moroccan populations, therapists do well to invest in psycho-education and in reaching a common illness explanatory model using clear language, in particular at the start of the treatment. Moreover, we found some evidence that following training and supervision in diversity-oriented competence might provide a valuable complement to standard evidence-based interventions to improve treatment adherence. This finding agreed with reviewed studies advising to adapt therapies to the patients' individual and cultural diversity characteristics and to their socioeconomic and clinical situation. To this purpose, it is advisable to use available assessment tools such as the Diversity-Sensitive Interview (Bekker & Frederiksen, 2005), included in the training, or the DSM-5 Cultural Formulation Interview (APA; 2013), which is in fact more diversity-minded that the label might do think.

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Incorporating intersectionality in therapy inevitably adds complexity to clinical practice. It demands from mental health care professionals a high level of self-reflection about less commonly explored topics, such as identity, and social privileges and disadvantages. Furthermore, it demands flexibility and clarity of mind to navigate through patients' varying, dynamically interacting aspects of diversity, not favoring e.g., age, ethnicity, gender/sex above the others, and to discover the interacting impact of these variables on the patients' mental health. Therapists also need to be able to continuously zoom in and out from the individual to the context. In this dissertation, we made the first attempt to shape a training including several of these elements to reinforce therapist diversity competence. We faced many difficulties and found no simple answers, but given the highly diversified societies we currently live in and the encouraging results we found towards a more inclusive mental health care, future work to refine this training and the meaning and expression of diversity competence seems meaningful for advancing clinical practice.

Implications for training and education

This dissertation has provided insights into possible relevant aspects of adequate treatment of depressive disorders in Turkish and Moroccan immigrant populations. Much of the gathered knowledge has reached clinical practice through the offered diversity-oriented training, but there is also a newer part of it that still could be integrated into improved versions of the training or in national clinical guidelines accessible to all therapists.

Moreover, among the lessons we learned from this training and the therapists' feedback was that the emphasis of future training must lay on the experiential learning, through many in vivo exercises and illustrations, and less on knowledge provision. Through therapists' and patients' feedback we know that population-specific knowledge was appreciated, but considering the current ever-changing, highly diverse societies, it is probably more important that therapists reinforce their attitudes and skills towards diversity, learn when and how to access knowledge and how to share it with their colleagues.

We also learned that diversity-oriented training in the future should be better tailored, in content and duration, to the therapist's needs and competence level. A two-day training seemed suitable to achieve some change in the level of competence, but improving skills and overall diversity competence might need years of education, in which management of diversity in mental health care is fully integrated into a curriculum and not provided sporadically and separated from other content (Dogra et al., 2016; Van Mens-Verhulst & Bekker, 2005).

Implications for policymakers

Our reviews and empirical findings (see Chapter 2, 3, 6) showed that, besides patient-level, and family/system variables (e.g., acculturation strategy, social support, perception of discrimination), there were important societal-level variables (e.g., social burden due to low SES, harsh work environments, discrimination) related to depression severity and treatment outcomes of Turkish and Moroccan immigrant populations. We also found several societal treatment obstacles and

facilitators. Hence, if we are ever to find effective ways of tackling depression among populations, immigrant and other disadvantaged groups in particular, organizational, social and political measures should be applied promoting mental health literacy, social participation, economic and practical accessibility to mental health care, and a more tolerant, inclusive, and just society in general.

Policymakers should look at the bigger picture and understand that contributing to the mental health of the growing immigrant populations means investing in the whole societal well-being and reducing costs in the long term (Rechel et al., 2013). They should also be conscious of the often-magnified impact that social legislative measures have on these groups, their well-being, their mental health care, and even the research projects studying these phenomena. To illustrate, we saw the numbers of Turkish- and Moroccan-Dutch patients drop drastically at the participating institutions after the Dutch government abolished the coverage of official translators for most immigrant patients since 2012 and, at the same time, increased the yearly individual contribution for mental health care. These measures took a toll, among others, on Dutch immigrant populations and their accessibility to and quality of health care. Integrating an intersectional framework to analyze power dynamics, systems of oppression, and privilege in mental health care; and to understand the interaction between the individual, institutional and societal factors is crucial to develop effective measures that contribute to equity (López & Gadsden, 2016). Also, funding organizations have a responsibility for promoting research that focuses on grasping, refining, evaluating, and implementing intersectionality-minded initiatives. In respect to implementation, the findings of this dissertation that are relevant to clinical practice with Turkish and Moroccan immigrant populations with depression could be integrated in the current Dutch quality standards for mental health care (see http://akwaggz.nl).

Recommendations for Future Research

In a recent review of the additional value of cultural competence to evidence-based treatments, Huey and colleagues (2014) advised against the further research of cultural or diversity competence and training in it. Their arguments were that there is up to now little evidence (few conducted studies) that improving therapist competence leads to improvement in patient outcomes; and that studying the involved processes is complex and, in their opinion, not feasible. As for the first argument, I disagree with the premise that the lack of evidence means that evidence is non-existing and that others should be discouraged in providing that evidence. Authors who have persevered in their efforts to study therapist competence have shown in recent studies that different therapeutic performances are related to race/ethnic aspects. There are some therapists who accomplish the same results with ethnic minorities as with ethnic non-immigrant populations, and there are others who accomplish better or worse results with ethnic minority groups than with ethnic non-immigrant groups and vice versa (Hayes et al., 2015; Imel et al., 2011). However, in order to expose such nuanced findings, methods such as Bayesian multilevel models should be prioritized above other traditional methods, such as RCT's, that might overshadow the individual results and lay too much weight on the average scores.

The second argument is, in my opinion, more valid than the first one. I do agree (and have experienced while conducting our studies) that studying therapist diversity competence is highly challenging. Among the dilemmas that we face at the moment, I can name the following: How to operationalize diversity competence and transform it into reliable, measurable variables? How to translate these competencies into transferrable units that can be taught in training or longer curricula? How to encompass training in the ever-evolving, similar, but also different target (ethnic) populations? How to avoid inter-therapist contamination after training, so that standard RCTs can be carried out? Should RCTs still be considered the 'gold standard' for this field? How to ensure that the measured treatment outcomes of different race/ethnic groups are actually related to the improved competences of the therapists? How to shed light on whether the intersectional framework really adds to clinical practice or unnecessarily complicates interventions?

The studies presented in this dissertation do not provide definite answers to all these questions, but they have provided guidance on what some future research steps and guidelines might be. First of all, it is crucial for the reliability and generalizability of the findings to achieve larger samples of ethnic and immigrant minorities from community and clinical samples. Knowing that ethnic and minority groups are often hard-to-reach groups, study designs, in the future, must pay extra attention to the sampling and recruitment method. Oversampling for ethnic and minority groups, cooperation and data sharing between institutions with similar objectives, and use of online recruitment resources are advised. Also, contextual variables that could influence the recruitment process, such as policy changes in the mental health care system, should be considered.

With access to large, national or European, datasets, conducting multilevel analyses to correct for the intercorrelation of measures within the same patient, the same therapist, and the same institution is warranted. Multilevel analyses or Bayesian hierarchical modeling also offer the possibility to examine the intersections between aspects of diversity, their associations with treatment outcomes and therapist competence more in-depth. In other words, what treatment or therapist works better for patients at specific intersections of aspects of diversity (Hayes, McAleavey, Castonguay, & Locke, 2016).

Furthermore, it is necessary to extend the research of what are measurable behaviors characteristic of diversity competence at the therapist level, but also at the institutional, and the societal-level (D. W. Sue & Torino, 2005). When we are able to point at what proven diversity competent therapists do differently and to associate these competencies to improved treatment outcomes, adherence, and satisfaction, we can continue tailoring guidelines for clinical practice and training. It is also necessary to study what type of training methods and duration contribute to obtaining the most permanent learning results (Hayes et al., 2015). A possible alternative to short-term, single training, is a completely embedded cultural and diversity competent curriculum integrated into the undergraduate, master, and post-master programs of mental health and clinical psychology (Dogra et al., 2016; Hayes et al., 2015). Observational and longitudinal, prospective studies could shed some light on what the effect of such an approach would be.

Conclusion

Even though research and mental health care for Turkish and Moroccan groups with depression are advancing, and accessibility and outcomes are improving, we found indications that these populations can still benefit from better tailoring of care to their specific needs, as groups, and as individuals. Analyses from an intersectional perspective indicated that various (intersecting) aspects of diversity were related to variability in the prevalence of depression, manifestation and treatment obstacles, facilitators and effectiveness. In this dissertation, we found that patients following standard evidence-based therapies for depression reported symptom reduction, but this improvement was modest and dropout was still a problem for ethnic minority groups. Furthermore, we found that diversity-oriented competence training, encompassing an intersectional framework with group-specific knowledge related to depressive disorders, was feasible. We did not find evidence for the effectivity of diversity-oriented competence training boosting symptom treatment outcomes. However, training contributed to enhanced treatment adherence and satisfaction with psychological health of Turkish- and Moroccan-Dutch outpatients in the secondary care, which tackles one of the largest problems in the mental health care for immigrant populations.

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Appendix S1 – Chapter 2 and Chapter 3

Detailed search strategy (Pubmed)

(((((Turk* OR Morocc* OR Kurd* OR Berber*[Title/Abstract])) AND (Europ* OR European union OR EU OR Western Europe OR North Europe OR United Kingdom OR England OR Scotland OR UK OR Wales OR British OR Scottish OR Netherlands OR Holland OR Dutch OR Belgi* OR France OR French OR Spain OR Spanish OR Portug* OR German* OR Austria* OR Switzerland OR Swiss OR Ital* OR Finland OR Finn OR Denmark OR Danish OR Norw* OR Swed*[Title/Abstract])) AND (immigrant OR migrant OR migration[Title/Abstract]) AND (depress* OR depression OR mood W/1 disorder OR affective W/1 disorder OR depressiv* OR somatoform W/1 disorder OR psychosomatic OR somati* OR pain OR depression NOT postpartum) AND (illness representation OR illness belief OR manifestation OR idiom W/2 distress OR prevalence OR risk factor OR determinant OR protective factor OR correlat* OR resilience OR help-seeking W/2 behavior OR therapeutic W/1 rapport OR acculturation OR treatment OR therapy OR treatment W/2 expectation OR perceived need OR mental W/2 health care OR dropout OR no-show OR attrition OR adherence OR quality life OR well being [Title/Abstract])) AND ("1970/01/01"[Date - Publication] : "2017/07/31"[Date – Publication])

Appendix S2 – Chapter 2 and Chapter 3

Criteria for quality assessment of the included studies

Criteria for quantitative studies	Scoring per criteri[a]	Scoring per section (separate scoring for Turkish and Moroccan sample) (1) strong; (2) moderate; (3) weak; (NA) not applicable
1. Selection bias		
a. Representativity of the specific target group sample[a]	1. Very likely (randomly selected) 2. Somewhat likely (referred from a source e.g., clinic in a systematic manner) 3. Not likely (self-referred) 4. Can't tell	Sum of all items 1. Strong: 5- 6 2. Moderate: 7- 12 3. Weak: 13+
b. Response rate[a]	1. 80 - 100% response 2. 60 – 79% response 3. less than 60% response 4. Can't tell	
c. Both male and female participants[b]	1. (Fairly) equal proportion of men and women (50%, +-20%) 2. Greatly uneven proportion of men and women 3. Only men or women	
d. Detailed description of the sample[b]	1. Description of basic elements and 2 or more socio-demographic, socio-economic indicators 2. Description of basic elements + one extra socio-demographic, socio-economic indicator 3. Description of only basic elements (gender, age, ethnicity) or no description	
e. Inclusion/ exclusion criteria clearly stated	1. Yes (both inclusion and exclusion criteria are stated) 2. Partially (only inclusion or exclusion criteria are stated) 3. No	

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Appendix S2. . Continued

Criteria for quantitative studies	Scoring per criteri[a]	Scoring per section (separate scoring for Turkish and Moroccan sample) (1) strong; (2) moderate; (3) weak; (NA) not applicable
2. Study design		
a. Type of design[a] (control group?)	1. Randomized controlled trial (RCT) 1. Controlled clinical trial (Cct) 2. Cohort analytic (two group pre + post) 2. Case-control intervention study/ between-groups cross-sectional 2. Cohort (one group pre + post (before and after)) 2. Interrupted time series 3. Single-subject cross-sectional 3. Other 3. Can't tell	1. Strong: a = 1 with b or c= 1 or 2 (then they are seen as Cct) 2. Moderate: a=2 3. Weak: a=3
b. Randomization method described (only for RCT)[a]	1. Yes 2. No NA. Not applicable	
c. Randomization method appropriate (only for RCT)[a]	1. Yes 2. No NA. Not applicable/ can't tell	
3. Confounders		
a. Interventions: Important differences between groups at baseline (ethnicity, sex, marital status, age, SES, education, etc.)[a] Cross-sectional study: Possible confounders responsible for the associations (mentioned by the authors)	1. Yes 2. No 3. Can't tell	1. Strong: a = 1 or 2 en b =1 2. Moderate: a=1 or 2 and b = 2 3. Weak: a = 1 and b = 3 or 4, a = 3
b. Percentage confounders /difference that were controlled for (e.g., stratification, matching, as covariates in analyses[a]	1. 80 – 100% (most) / Not applicable (No important differences) 2. 60 – 79% (some) 3. Less than 60% (few or none) 4. Can't Tell	

Criteria for quantitative studies	Scoring per criteria[a]	Scoring per section (separate scoring for Turkish and Moroccan sample) (1) strong; (2) moderate; (3) weak; (NA) not applicable
4. Blinding (RCT'S, controlled clinical trials)		
a. Assessors were aware of the intervention[a]	1. No 2. Yes 3. Can't tell NA. Not applicable	1. Strong: a = 1 and b = 1 2. Moderate: a = 2/3 and b = 1 a = 1 and b = 2/3 3. Weak: a = 2 and b = 2 a = 3 and b is 3 NA. data was self-reported or collected by surveys, questionnaires or interviews
b. Participants were aware of the intervention[a]	1. No 2. Yes 3. Can't tell NA. Not applicable	
5. Data collection methods		
a. Valid (assess construct accurately) instruments for the specific target group (T/M)[a]	1. Yes, totally (all of the relevant instruments, validated in T/M immigrant samples) 2. Yes, partially (not all the relevant instruments used are valid, or validated in other immigrant samples, or provided back-translated instruments) 3. No 4. Can't tell Read relevant as needed for our purpose (depression instrument and other related instruments)	1. Strong: a = 1 and b = 1 2. Moderate: a = 1 and b = 2, 3 or 4 a = 2 and b = 1 or 2 a = 3 or 4 and b = 1 3. Weak: a = 2 and b = 3 or 4 a = 3 or 4 and b = 2, 3 or 4
b. Reliable (internally consistent) instruments for the specific target group (T/M)[a]	1. Yes, totally (all of the relevant instruments) 2. Yes, partially (not all the relevant instruments used are reliable) 3. No (as indicated by Cronbach alpha in the current study) 4. Can't tell (no Cronbach alpha of the current study reported) Read relevant as needed for our purpose (depression instrument and other related instruments)	

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Appendix S2 . Continued

Criteria for quantitative studies	Scoring per criteri[a]	Scoring per section (separate scoring for Turkish and Moroccan sample) (1) strong; (2) moderate; (3) weak; (NA) not applicable
6. Withdrawal and drop-outs (interventions and longitudinal studies)		
a. Report of numbers and reasons of drop-out per group[a]	1. Yes (both numbers and reasons per group) 2. No 3. Can't tell NA. Not Applicable (e.g., one-time surveys or interviews)	1. Strong: a=1 and b = 1 2. Moderate: a= 1 and b = 2
b. Percentage of people completing the study or included in the final analysis per group (rate lowest percentage)[a]	1. 80 -100% 2. 60 - 79% 3. less than 60% 4. Can't tell NA. Not Applicable (e.g., retrospective case-control)	3. Weak: a = 2, 3; a= 1 and b = 3 NA. Not Applicable
7. Intervention integrity		
a. Percentage of participants receiving the complete intervention (experimental completers of initial sample without follow-up)[a]	1. 80 -100% 2. 60 - 79% 3. less than 60% 4. Can't tell NA. Not Applicable (no intervention study)	1. Strong: a = 1 and b = 1 and c = 1 2. Moderate: a = 1 and b = 2 and c = 1 a = 2 and b = 1 or c = 1 a = 2 and b = 2 and c = 1
b. Consistency of intervention[a]	1. Yes (a method to measure if same intervention was provided to all participants is described) 2. No 3. Can't tell NA. Not applicable	3. Weak: a = 3 and b = 1 and c = 1 a = 2 and b = 2/3 and c = 2/3 a = 3 / 4 and b = 2/3 or c = 2/3
c. Robust intervention (contamination or co-intervention unlikely)[a]	1.Yes 2. No 3.Can't tell NA. Not applicable	Sum of all items 1. Strong: 3 2. Moderate: 4-5 3. Weak: 6+ NA. Not Applicable

Criteria for quantitative studies	Scoring per criteria[a]	Scoring per section (separate scoring for Turkish and Moroccan sample) (1) strong; (2) moderate; (3) weak; (NA) not applicable
8. Analyses		
a. Sample size large enough to detect an effect of 5% or more in or between the groups[b]	1. Yes (50 per group) 2. Not likely / partially 3. No	Sum of all items (excluding c) 1. Strong: 5-7
b. A priori sample size calculation described[b]	1. Yes 2. No	2. Moderate: 8-10 3. Weak: 11+
c. Unit of allocation (only RCTs – unit randomized to the interventions, mostly individuals)[a]	1. community 2. organization/institution 3. practice/office 4. individual NA. Not applicable (not an RCT)	
d. Appropriate correspondence between research question (s), study design and statistical methods (e.g., intention to threat is appropriate)[a,b]	1. Yes 2. Partially (not all analyses) 3. No	
e. Effect sizes reported[b]	1. Yes 2. Partially (not for all analyses) 2. No	
f. Use of imputation methods rather than actual data[b]	1. No missings, only completers (described) 2. Yes (imputation method described) 3. Yes, incomplete information (missings are mentioned, but not a method to handle them) 4. Can't tell (nothing described about missings)	
9. Global rating		
		1. STRONG (no WEAK ratings for any section) 2. MODERATE (one WEAK rating in one of the sections) 3. WEAK (two or more WEAK ratings across the sections)

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Appendix S2 . Continued

Criteria for qualitative studies	Quality indicators (possible, not extensive, features for consideration)[d,e]	Scoring
1. Research question clearly defined[c]	a. Statement of why the research was done b. Clear formulation of the specific question that is addressed	1. Strong: Complete/ detailed/ clear information (a and b) 2. Moderate: Incomplete/vague information (a or b) 3. Weak: Can't tell/ Not described
2. Appropriate use of a qualitative approach[d]	a. The objective of the research was to explore, interpret, or obtain a deeper understanding of a particular clinical issue	1. Strong: Yes 2. Moderate: Partially yes 3. Weak: No
3. Context of research setting is clearly described[c,d]	a. The (historical/social/organizational) setting in which the research is done is clearly described b. The researchers' perspective, vision, cultural background are described	1. Strong: Complete/ detailed/ clear information (a and b) 2. Moderate: Incomplete information (a or b) 3. Weak: Vague information/ Can't tell/ Not described
4. Sampling strategy clearly described and justified[c,d]	a. Description of population of interest b. Rationale for basis of target sample c. Description of methods of access and approach	1. Strong: Information allows straightforward replicability 2. Moderate: Incomplete information 3. Weak: Vague information/ Can't tell/ Not described
5. Sampling strategy ensured generalisability[c]	a. Profile of achieved sample allows making conclusions that concerns the whole population b. Maximizing inclusion (e.g., language matching, specialized recruitment)	1. Strong: Yes 2. Moderate: Moderately 3. Weak: No
6. Data-collection procedure was clearly described[c,d]	a. Discussion of who conducted the data collection. b. Discussion of conventions for data-collection	1. Strong: Information allows straightforward replicability 2. Moderate: Incomplete information 3. Weak: Vague information/ Can't tell/ Not described
7. Data analysis procedure clearly described and justified[c]	a. Description of the form of original data (e.g., use of verbatim transcripts, etc.) b. The analysis related to the original research question c. The method to identify themes and concepts was clear and justified	1. Strong: Information allows straightforward replicability 2. Moderate: Incomplete information 3. Weak: Vague information/ Can't tell/ Not described
8. Evidence (citations) was used in the paper and available for independent analysis[c,d]	a. The authors cite actual data. b. The cited data is appropriate.	1. Strong: 80 – 100% (in most of the statements) 2. Moderate: 60 – 79% (some) 3. Weak: Less than 60% (few or none)
9. Reliability of analysis[c,d]	a. The data analysis was done by many researchers.	1. Strong: >2 researchers 2. Moderate: 2 researchers 3. Weak: One researcher/ Can't tell/ Not described

10. Diverse observations were taken into account[c]	a. There was evidence of seeking out observations that might have contradicted/ modified the analysis b. Evidence of attention to outliers, exceptions or negative cases. c. Identification of patterns of associations with divergent position.	1. Strong: Yes, many times (>4) 2. Moderate: Yes, sometimes (3-4) 3. Weak: Few or none (1-2)
11. Link between data, interpretations and conclusions is logic, comprehensible[c,d]	a. Interpretation is relatively untainted with personal perspective b. The interpretation is a comprehensible result of the data analysis. c. The interpretation is reasonably coherent with what is already known.	1. Strong: 80 – 100% conclusions are comprehensible (most) 2. Moderate: 60 – 79% (some) 3. Weak: Less than 60% (few or none)
Global rating[a]		1. STRONG (no WEAK ratings for any section) 2. MODERATE (one WEAK rating in one of the sections) 3. WEAK (two or more WEAK ratings across the sections)

[a] Tool of the Effective Public Health Practice Project
[b] Added criteria relevant for current purpose
[c] BMJ Qualitative research checklist
[d] Greenhalgh & Taylor, 1997, [e] Quality in Qualitative Evaluation Framework

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Appendix A – Chapter 2

Detailed quality ratings of the included studies following rules in appendix S2

Study, year	Sample (T/M)	Sum Selection bias	1. Selection bias	2. Study design	3. Confounders	4. Blinding	5. Data collection	6. Withdrawals dropouts	Sum Intervention integrity	7. Intervention integrity	Sum Analyses	8. Analyses	Global quality rating
Akbiyik et al., 2008	T	8	2	2	1	na	3	na	0	0	10	2	2
Arens et al., 2013	T	13	3	2	1	na	2	na	0	0	11	3	3
Balkir et al., 2013	T	13	3	2	1	na	2	na	0	0	13	3	3
Balkir, et al., 2013	T	13	3	2	1	na	3	na	0	0	12	3	3
Baltas & Steptoe, 2000	T	12	2	2	3	na	3	na	0	0	13	3	3
Bengi-Arslan et al., 2002	T	11	2	3	1	na	1	na	0	0	6	1	2
Beutel et al., 2016	T	6	1	2	3	na	3	na	0	0	7	1	3
Braam et al., 2010	T	8	2	2	1	na	2	na	0	0	10	2	1
Braam et al., 2010	M	8	2	2	1	na	2	na	0	0	10	2	1
De Wit et al., 2008	T	8	2	2	1	na	3	na	0	0	10	2	2
De Wit et al., 2008	M	8	2	2	1	na	3	na	0	0	10	2	2
Erim et al., 2011	T	7	2	3	3	na	2	na	0	0	11	3	3
Erim et al., 2011	T	11	2	2	1	na	2	na	0	0	11	3	2
Fassaert, Nielen et al., 2010	T	11	2	2	1	na	3	na	0	0	10	2	2
Fassaert, Nielen et al., 2010	M	11	2	2	1	na	3	na	0	0	10	2	2
Fassaert, Peen et al., 2010	T	11	2	2	1	na	3	na	0	0	7	1	2
Fassaert, Peen et al., 2010	M	11	2	2	1	na	3	na	0	0	7	1	2
Gül and Kolb, 2009	T	12	2	2	3	na	3	na	0	0	12	3	3
Ikram et al., 2015	T	8	2	2	1	na	2	na	0	0	9	2	1
Ikram et al., 2016	T	8	2	2	1	na	2	na	0	0	8	2	1
Ikram et al., 2016	M	8	2	2	1	na	2	na	0	0	8	2	1
Kizilhan et al., 2015	T	15	3	2	3	na	2	na	0	0	8	2	3
Levecque et al., 2009	T	7	2	2	1	na	2	na	0	0	10	2	1
Levecque et al., 2009	M	7	2	2	1	na	3	na	0	0	10	2	2
Mewes et al., 2010	T	8	2	2	1	na	3	na	0	0	12	3	3
Mewes et al., 2015	T	12	2	3	1	na	2	na	0	0	9	2	2
Morawa, & Erim, 2014a	T	6	1	3	1	na	2	na	0	0	8	2	2
Morawa, & Erim, 2014b	T	12	2	2	1	na	2	na	0	0	7	1	1
Nap et al., 2015	T	12	2	2	3	na	2	na	0	0	10	2	2

Appendix A - Chapter 2. Continued

Study, year	Sample (T/M)	Sum Selection bias	1. Selection bias	2. Study design	3. Confounders	4. Blinding	5. Data collection	6. Withdrawals dropouts	Sum Intervention integrity	7. Intervention integrity	Sum Analyses	8. Analyses	Global quality rating
													Quality Criteria
Nap et al., 2015	M	12	2	2	3	na	2	na	0	0	10	2	2
Reijneveld et al., 2007	T	6	1	2	3	na	2	na	0	0	8	2	2
Reijneveld et al., 2007	M	6	1	2	3	na	2	na	0	0	8	2	2
Sariaslan et al., 2014	T	7	2	2	1	na	2	na	0	0	9	2	1
Schmitz & Schmitz, 2012	T	15	3	2	3	na	2	na	0	0	10	2	3
Schrier et al., 2010	T	8	2	2	2	na	3	na	0	0	10	2	2
Schrier et al. 2010	M	8	2	2	2	na	3	na	0	0	9	2	2
Schrier et al., 2012	T	6	1	2	3	na	2	na	0	0	7	1	2
Schrier et al., 2012	M	6	1	2	3	na	3	na	0	0	7	1	3
Schrier et al., 2013	T	6	1	2	1	na	3	na	0	0	7	1	2
Schrier et al., 2013 (49)	M	6	1	2	1	na	3	na	0	0	7	1	2
Selten et al., 2012	T	13	3	2	3	na	3	na	0	0	6	1	3
Selten et al., 2012	M	13	3	2	3	na	3	na	0	0	6	1	3
Tagay et al., 2008	T	8	2	3	3	na	3	na	0	0	10	2	3
Ünlu et al., 2014	T	10	2	3	2	na	2	na	0	0	8	2	2
Uslucan, 2005	T	12	2	3	1	na	3	na	0	0	10	2	3
Van der Wurff et al., 2004	T	7	2	2	1	na	2	na	0	0	8	2	1
Van der Wurff et al., 2004	M	7	2	2	1	na	2	na	0	0	8	2	1
Van Dijk et al., 2010	T	8	2	2	1	na	2	na	0	0	7	1	1
Van Dijk et al., 2010	M	8	2	2	1	na	2	na	0	0	7	1	1

Note. Abbreviations: T = Turkish sample, M = Moroccan sample, na = not applicable; Global quality rating 1 = strong quality (SQ), 2 = moderate quality (MQ), 3 = weak quality (WQ).

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Appendix A – Chapter 3

Detailed quality ratings of the included studies following rules in appendix S2

Quantitative study, year	Sample (T/M)	Sum Selection bias	1. Selection bias	2. Study design	3. Confounders	4. Blinding	5. Data collection	6. Withdrawals dropouts	Sum Intervention integrity	7. Intervention integrity	Sum Analyses	8. Analyses	Global quality rating
Akbiyik et al., 2008	T	8	2	2	1	na	3	na	0	0	10	2	2
Akbiyik et al., 2009	T	11	2	2	3	na	3	na	0	0	10	2	3
Beutel et al., 2016	T	6	1	2	3	na	3	na	0	0	7	1	3
Callies et al. 2007	T	13	3	2	3	na	3	na	0	0	12	3	3
Deisenhammer et al., 2012	T	13	3	2	2	na	3	na	0	0	12	3	3
Fassaert et al., 2009	T	7	2	2	1	na	3	na	0	0	7	1	2
Fassaert et al., 2009	M	7	2	2	1	na	3	na	0	0	7	1	2
Fassaert, Nielen et al., 2010	T	11	2	2	1	na	3	na	0	0	10	2	2
Fassaert, Nielen et al., 2010	M	11	2	2	1	na	3	na	0	0	10	2	2
Fassaert, Peen et al., 2010	T	11	2	2	1	na	3	na	0	0	7	1	2
Fassaert, Peen et al., 2010	M	11	2	2	1	na	3	na	0	0	7	1	2
Heredia Montesinos et al., 2012	T	12	2	3	3	na	3	na	0	0	11	3	3
Mewes et al., 2010	T	8	2	2	1	na	3	na	0	0	12	3	3
Morawa & Erim 2014	T	6	1	3	1	na	2	na	0	0	8	2	2
Mösko et al., (2008)	T	7	2	2	2	na	3	3	10	3	7	1	3
Mösko et al., (2011)	T	7	2	2	2	na	3	3	10	3	8	2	3
Nap et al., 2015	T	12	2	2	3	na	2	na	0	0	10	2	2
Nap et al., 2015	M	12	2	2	3	na	2	na	0	0	10	2	2
C. Nickel et al., 2006	T	6	1	2	3	na	3	3	6	3	7	1	3
M. Nickel et al., 2006	T	7	2	1	1	3	2	3	4	2	8	2	3
Reich et al., 2015	T	10	2	2	1	na	3	na	0	0	8	2	2
Renner & Berry, 2011	T	12	2	1	1	3	3	3	8	3	11	3	3
Sariaslan et al., 2014	T	7	2	2	1	na	2	na	0	0	9	2	1
Schouler-Ocak et al., 2010	T	8	2	2	3	na	3	na	0	0	11	3	3
Schrier et al., 2010	T	8	2	2	2	na	3	na	0	0	10	2	2
Schrier et al., 2010	M	8	2	2	2	na	3	na	0	0	9	2	2
Spijker et al., 2004	T	7	2	2	3	na	2	na	0	0	9	2	2
Spijker et al., 2004	M	7	2	2	3	na	2	na	0	0	9	2	2
Ünlü et al., 2013	T	11	2	1	1	3	2	3	9	3	8	2	3
Zollman, 2016	T	12	2	2	3	na	3	na	0	0	11	3	3

Appendix A - Chapter 3. Continued

Qualitative study, year	Sample (T/M)	1. Clarity of research question	2. Appropriate qualitative approach	3. Description of context of research	4. Sampling strategy	5. Generalizability of results	6. Clarity of data collection procedure	7. Clarity of data analysis procedure	8. Use of citations	9. Reliability of the analysis	10. Diversity of observations	11. Clarity of data interpretation procedure	Global quality rating
						Quality Criteria							
Baarnhielm and Ekblad, 2000	T	2	1	1	2	3	1	1	1	3	2	1	2
Borra, 2011	T	1	1	2	2	3	2	1	2	1	2	1	2
Smits et al., 2005	T	1	1	3	1	1	1	2	2	3	1	1	2
Smits et al., 2005	M	1	1	3	1	1	1	2	2	3	1	1	2
Siller et al., 2017	T	1	1	3	2	2	2	1	2	2	2	1	2

Note. Abbreviations: T = Turkish sample, M = Moroccan sample, na = not applicable; Global quality rating 1 = strong quality (SQ), 2 = moderate quality (MQ), 3 = weak quality (WQ).

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Appendix A – Chapter 5

Content and Methods of Diversity-Oriented Training

Module	Aim	Content per element

1. Diversity and social context	Become aware of the own diversity identity as a therapist.
	
	Promote the recognition of the need for diversity competence.
	
	Learn core issues relevant to diversity, culture, and migration.
	
	Expand general knowledge and awareness of social background of Turkish- and Moroccan-Dutch.
		1. Introductory exercise to intersectionality model of diversity. Caleidoscopia: a diversity game (Pereira, Kessler, Tjoa, van Tijen, & van Duin, 2003)
		2. Interactive theoretical lecture and discussion on:
		  - The relevance to mental health care of diversity and the intersectional way of thinking.
		  - Models of cultural competence. Core issues for ethnic minorities.
		  - What does diversity competence mean in clinical practice (e.g., assessment, treatment)?
		Discussed models were: Sue et al.'s s (1982) tripartite model of competence, Arredondo et al.'s (1996) behavioral operationalization of cultural competence, Berry's (1992) model of acculturation.
		3. Exercise 'imagine you migrate to Turkey/ Morocco'
		4. Discussion of the cultural, sociopolitical and socioeconomic background of Turkish- and Moroccan-Dutch men and women. (e.g., immigration history, discrimination, cultural shock, social rejection, generation differences).
		Evaluation of module 1

2. Assessment and diagnosis	Increase knowledge about the incidence and prevalence of depressive disorder and symptoms. Expansion of group-specific awareness, knowledge, and skills relevant to the intake and assessment phase. Learn to work with cultural and diversity interviews.	1. Prevalence of depression in Turkish and Moroccan-Dutch. Discussion of a clinical case: case formulation and diversity identity. 2. Illness perception, idioms of distress and the etiology of the psychopathology of Turkish and Moroccan ethnic patients with depressive symptoms. Theoretic presentation and discussion of empirical findings. 3. Group analysis of intake interview of a clinical case. What are pitfalls and good practices? 4. Discussion of competencies of therapists needed during the intake phase (information provision, the patient as the first source of information, hypothesis testing/ scientific thinking). 5. Role-play: the first encounter with a Turkish or Moroccan-Dutch patient. Use of the Diversity-sensitive intake form (Bekker & Frederiks, 2005). 6. Pitfalls and good practices during the diagnostic phase (cross-cultural validity of the DSM-IV and diagnostic instruments, somatization). Review of the Center for Epidemiologic Studies Depression Scale (CES-D; Bouma, Ranchor, Sanderman, & van Sonderen, 1995). Evaluation of module 2
Homework	Learn to integrate diversity in the critical analysis of existing guidelines and own case conceptualization.	1. Critical analysis of a gender- and cultural- sensitive supplement of the national guidelines to treat depression (Noordenbos, 2007). 2. Case conceptualization of a patient of own case-load integrating the concepts of diversity in the possibilities for assessment, diagnose and treatment.

Appendix A - Chapter 5. Continued

3. Treatment and cooperative working	Learn strategies to improve intercultural communication and negotiation of (treatment) frameworks.	Review of the homework assignment 1. Interactive theoretic lecture and discussion on traditional and religious medicine in mental health care. 2. Working with traditional medicine: explanatory models of illness and good practices. 3. Discussion of participant's own clinical cases: how to negotiate a treatment plan departing from different frameworks? Evaluation of module 3
4. Diversity-oriented and group-specific therapy	Integrate individual, social and group-specific aspects in clinical practice. Expansion of group-specific awareness, knowledge, and skills relevant to the treatment phase.	1. Mikado, intercultural knowledge advisory institution in the Netherlands. Importance of diversity consultation. 2. Warming up exercise: Illustrative cases and pictures. 3. Specific needs of Turkish- and Moroccan-Dutch patients during therapy. Discussion of literature findings. 4. Diversity competencies for intercultural communication. 5. Importance of group-specific knowledge, scientific mindedness and dynamic sizing (D.W. Sue, 1998; S. Sue, 2006). 6. Working with interpreters. Roleplay Evaluation of module 4

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Appendix A – Chapter 6

Study satisfaction outcomes of participants at posttest including between-group effect size (Cohen's d)

			Post-test		
Outcome measure and group		*n*	Mean (*SD*)	*p*	Cohen's *d* [95% CI]
Satisfaction with treatment (range)					
Time of measurement	Experimental group	47	13.64 (8.42)	.28	
	Control group	12	16.76 (10.4)		
Joint decision making (1-2.5)	Experimental group	42	1.42 (.36)	.57	-0.21 [-0.87, 0.44]
	Control group	12	1.50 (.40)		
Relational approach (1.5-4)	Experimental group	42	3.40 (.63)	.90	0.00 [-0.65, 0.65]
	Control group	12	3.40 (.52)		
Accomplishment of therapeutic objective (1-2)	Experimental group	42	1.77 (.33)	.15	0.52 [-0.14, 1.18]
	Control group	12	1.58 (.40)		
Subjective symptom change (1-5)	Experimental group	42	3.35 (1.14)	.88	0.06 [-0.59, 0.71]
	Control group	12	3.28 (1.10)		
Institution recommendation (1-4)	Experimental group	42	3.20 (.89)	.25	-0.05 [-0.71, 0.60]
	Control group	12	3.25 (.97)		
Treatment evaluation score (0-10)	Experimental group	42	6.48 (2.63)	.35	-0.22 [-0.88, 0.43]
	Control group	12	7.08 (2.78)		
Therapist's diversity-oriented competence (range)					
Time of measurement	Experimental group	44	16.15 (10.1)	.34	
	Control group	12	13.43 (8.35)		
Attitude (8-32)	Experimental group	37	24.32 (4.89)	.31	-0.14 [-0.93, 0.64]
	Control group	8	25.09 (5.83)		
Skills (12-48)	Experimental group	37	36.27 (7.22)	.11	-0.24 [-1.02, 0.54]
	Control group	8	38.16 (8.53)		
Knowledge (7-28)	Experimental group	37	22.48 (4.96)	.93	-0.20 [-0.98, 0.59]
	Control group	8	23.42 (4.62)		
Total (27-108)	Experimental group	37	83.00 (15.86)	.28	-0.23 [-1.01, 0.55]
	Control group	8	86.83 (17.64)		

Appendix B – Chapter 6

Percentage of Missed and No-show Appointments Compared Between Groups.

Adherence indicator	Experimental group (n=59)	Control group (n=18)	P	Cohen's *d*/ *phi coefficient*
Number of planned appointments - supportive therapy, mean (SD)	16.03 (13.0)	29.8 (25.6)	.15	-0.86
Percentage missed, mean (SD)	24.9 (25.4)	11.3 (12.1)	.13	0.58
Percentage no-show*,	15.5 (22.3)	10.1 (15.2)	.57	0.25
Number of planned appointments - curative therapy, mean (SD)	18.7 (11.7)	15.8 (8.9)	.56	0.25
Percentage missed, mean (SD)	19.1 (17.7)	25.9 (29.3)	.44	-0.36
Percentage no-show	15.5 (17.3)	7.0 (12.4)	.29	0.50
Number of planned appointments - combined treatment, mean (SD)	28.1 (18.8)	34.7 (22.4)	.32	-0.34
Percentage missed, mean (SD)	19.5 (16.1)	19.6 (21.5)	.99	-0.01
Percentage no-show	14.8 (15.6)	10.7 (15.1)	.49	0.26

Note. *No-show defined as missed appointments without previous notice.

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Appendix C – Chapter 6

Fixed Effect Estimates for the Examined Models Predicting Between-Groups Change over Time of the Outcome Variables

Clinical outcome variables[a]	Depression (CES-D)		Depression (BSI)		Somatization		Anxiety		Psychological Distress	
	B	[95% CI]	B	[95% CI]	B	[95% CI]	B	[95% CI]	B	[95% CI]
Non-adjusted model										
Intercept	36.42**	[29.70, 43.14]	2.79*	[2.26, 3.32]	2.45*	[1.90, 3.00]	2.52**	[1.91, 3.13]	2.50**	[2.03, 2.97]
Group (reference: control)	-0.65	[-8.07, 6.77]	-0.40	[-0.99, 0.19]	-0.02	[-0.63, 0.59]	-0.13	[-0.81, 0.55]	-0.31	[-0.83,0.21]
Time (reference: pre-test)	-3.51*	[-11.30, 4.29]	-0.43*[b]	[-0.97, 0.10]	-0.27	[-0.88, 0.34]	-0.34	[-1.00, 0.33]	-0.29*	[-0.79, 0.22]
Group*time	-3.10	[-11.68, 5.47]	-0.02	[-0.60, 0.57]	-0.12	[-0.79, 055]	-0.02	[-0.74, 0.71]	-0.02	[-0.58, 0.53]
Adjusted model										
Intercept	38.98**	[27.47, 50.48]	2.14*	[1.20, 3.09]	2.59**	[1.55, 3.63]	2.40**	[1.27, 3.52]	2.43**	[1.57, 3.29]
Group (reference: control)	-13.63*	[-23.56, -3.70]	-0.39	[-0.92, 0.15]	0.31	[-0.53, 1.15]	-0.32	[-0.95, 0.32]	-1.05*	[-1.77, -0.33]
Time (reference: pre-test)	-6.85*	[-10.39, -3.31]	-0.55**	[-0.79, -0.32]	-0.35*	[-0.61, -0.08]	-0.38*	[-0.68, -0.08]	-0.38*	[-0.61, -0.16]
Group*time	ns.		ns.		ns.		ns.		ns.	
Group*sex	14.68*	[2.39-26.97]	ns.		ns.		ns.		0.95*	[0.06, 1.84]
Group*treatment duration	ns.		ns.		-0.05*	[-0.10, -0.004]	ns.		ns.	
Education (years)	0.02	[-0.45, 0.49]	0.03	[-0.01, 0.07]	-0.04	[-0.08, 0.002]	-0.01	[-0.05, 0.04]	0.004	[-0.03, 0.04]
Treatment duration (months)	0.19	[-0.07, 0.45]	0.03*	[0.002, 0.05]	0.05*	[0.007, 0.09]	0.01	[-0.01, 0.04]	0.01	[-0.01, 0.03]
Female (reference: male)	-7.31	[-17.55, 2.93]	0.26	[-0.25, 0.76]	0.66*	[0.17, 1.16]	0.43	[-0.16, 1.03]	-0.36	[-1.11, 0.39]
Treatment (reference: only supportive)										
Only curative therapy (CBT),	0.83	[-9.66, 11.32]	-0.10	[-0.99, 0.79]	-0.70	[-1.59, 0.19]	-0.70	[-1.74, 0.34]	0.004	[-0.74, 0.75]
Combined therapy (supportive-curative)	0.94	[-7.44, 9.32]	-0.15	[-0.86, 0.56]	-0.71*	[-1.41, -0.01]	-0.52	[-1.35, 0.31]	0.02	[-0.59, 0.62]
Medication (reference: no medication)										
Antidepressant only	-4.06	[-10.67, 2.55]	-0.47	[-1.03, 0.09]	-0.24	[-0.80, 0.31]	0.21	[-0.46, 0.87]	-0.13	[-0.60, 0.35]
Other psychotropic drugs	2.85	[-10.67, 2.55]	0.18	[-0.36, 0.71]	0.23	[-0.30, 0.76]	0.53	[-0.10, 1.15]	0.27	[-0.18, 0.72]

Note. * $p < .05$; ** $p < .001$. [a] A negative number means symptom reduction in comparison with the reference group. [b] $F = 8.95$. Abbreviations: B = B-coefficient estimate; CI = Confidence interval.

Appendix C (continued) – Chapter 6

Fixed Effect Estimates for the Examined Models Predicting Between-Groups Change over Time of the Outcome Variables

| | Quality of life outcome variables[b] (WHOQOL-BREF) | | | | | | | | | |
| | General Facet | | Physical Health | | Psychological Health | | Social Relationships | | Environment | |
	B	[95% CI]	B	[95% CI]	B	[95% CI]	B	[95% CI]	B	[95% CI]
Non-adjusted model										
Intercept	4.66**	[3.70, 5.62]	8.88**	[7.23, 10.49]	10.77**	[9.17, 12.38]	10.32**	[8.21, 12.42]	12.57**	[11.10, 14.04]
Group (reference: control)	-0.26	[-1.32, 0.79]	0.18	[-1.58, 1.95]	-1.25	[-3.00, 0.51]	1.36	[-0.97, 3.69]	-0.72	[-2.33, 0.90]
Time (reference: pre-test)	-0.37	[-1.46, 0.72]	0.79	[-0.95, 2.52]	-079	[-2.65, 1.06]	-0.70	[-2.85, 1.45]	-0.25	[-1.89, 1.39]
Group*time	1.02	[-0.16, 2.20]	0.27	[-1.61, 2.15]	2.23*	[0.21, 4.25]	0.69	[-1.63, 3.01]	0.82	[-0.96, 2.60]
Adjusted model										
Intercept	3.78**	[2.09, 5.42]	7.73**	[4.77, 10.68]	9.63**	[7.13, 12.12]	9.20**	[5.18, 13.21]	12.81**	[10.23, 15.40]
Group (reference: control)	0.42	[-0.52, 1.37]	0.52	[-1.15, 2.19]	-1.28	[-3.11, 0.54]	1.92	[-0.39, 4.18]	0.04	[-1.43, 1.51]
Time (reference: pre-test)	0.51*	[0.07, 0.96]	1.12*	[0.42, 1.82]	-0.75	[-2.64, 1.14]	0.37	[-0.51, 1.25]	0.55	[-0.11, 1.21]
Group*time	ns.		ns.		2.17*	[0.10, 4.23]	ns.		ns.	
Education (years)	-0.01	[-0.08, 0.06]	-0.004	[-0.13, 0.12]	-0.02	[-0.12, 0.08]	-0.02	[-0.19, 0.16]	-0.02	[-0.13, 0.09]
Treatment duration (months)	-0.04	[-0.08, 0.003]	-0.06	[-0.13, 0.01]	-0.08*	[-0.14, -0.03]	-0.08	[-0.18, 0.01]	-0.05	[-0.11, 0.02]
Female (reference: male)	-0.15	[-1.04, 0.74]	-0.40	[-1.98, 1.18]	0.01	[-1.22, 1.25]	1.08	[-1.06, 3.22]	-0.34	[-1.72, 1.04]
Treatment (reference: only supportive)										
Only curative therapy (CBT)	0.80	[-0.77, 2.37]	2.45	[-0.34, 5.24]	1.56	[-0.67, 3.74]	1.87	[-1.90, 5.65]	0.98	[-1.46, 3.42]
Combined therapy (supportive-curative)	0.88	[-0.37, 2.13]	1.60	[-0.61, 3.82]	2.10*	[0.34, 3.85]	1.11	[-1.88, 4.11]	0.35	[-1.59, 2.29]
Medication (reference: no medication)										
Antidepressant only	0.81	[-0.18, 1.81]	1.36	[-0.41, 3.12]	1.94*	[0.55, 3.33]	1.04	[-1.36, 3.44]	0.51	[-1.04, 2.06]
Other psychotropic drugs	0.10	[-0.85, 1.04]	0.35	[-1.32, 2.03]	0.80	[-0.51, 2.11]	-0.78	[-3.06, 1.49]	-0.62	[-2.09, 0.84]

Note. * $p < .05$; ** $p < .001$. [a] A positive number means increase in quality of life comparison with the reference group. Abbreviations: B = B-coefficient estimate; CI = Confidence interval.

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Summary

In this dissertation, I present the work that my colleagues and I conducted aiming at two main goals. The first goal concerned gaining better insight into the state of the art with respect to the prevalence and correlates of depression, symptom manifestation, treatment effectiveness and treatment possibilities of Turkish and Moroccan immigrant populations with depression in Europe. The second goal was to determine whether diversity-oriented competence training for mental health care providers (MHPs) contributed to improve the mental health care for these groups. With this dissertation, my colleagues and I sought to link and examine two often overlooked topics in the literature: the mental health status and the quality of mental health care provided to ethnic minorities and the effectiveness of competence training for therapists at the patient level.

Turkish and Moroccan immigrant populations are the target groups of this dissertation. These communities represent two of the largest non-EU immigrant populations in Europe. As is the case with some other immigrant groups, there were reports that Turkish and Moroccan immigrant populations were vulnerable to experiencing low well-being related to social and economic struggles associated, among others, with the immigration and acculturation processes. These two populations also share a particular history of labor migration and changing, contradictory European policies on migration, which has (negatively) influenced their integration, position, and image in the society.

The provision of mental health care to immigrant populations, including to Turkish and Moroccan people, has proven challenging. In past years, research has shown that MHPs experience difficulties integrating different cultural frameworks and explanatory models of illness to clinical practice, which sometimes result in ethnic minority patients prematurely dropping out of treatment or receiving treatment not fitting their needs and expectations. Training in cultural competence was introduced as one of the first approaches to target these complexities, by teaching MHPs awareness, knowledge, and skills in ethnocultural topics. There are two important limitations to be mentioned regarding cultural competence. One refers to the fact that its effectiveness in mental health care has mainly been examined at the therapist level. The other refers to the restrictive character of focusing primarily on the ethnic/racial aspects of groups in a society that steadily becomes more diverse (including within ethnic groups).

A critical conceptual development was the intersectionality theory introduced by the black, feminist movement in the 80s. Intersectionality highlights the understanding that (mental health) needs are shaped by the dynamic interrelation (not summation) of aspects of diversity, of which race/ethnicity and culture are only two of the possible domains. Diversity competence builds forth on both cultural competence and the intersectionality framework and is defined in this dissertation as "the set of attitudes, knowledge, and skills that enables MHPs to integrate intersectionality in the analysis of their own identity, their patients' situation and needs, and their therapeutic interaction" (see p. 20, Chapter 1). Diversity competence also refers to the integration of population-specific as well as of individual characteristics and insights into

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therapeutic interventions and treatment. The training we evaluated in this dissertation received the name 'diversity-oriented competence' because it is the first attempt to integrate diversity competence and intersectionality into clinical practice, so several but not yet all of the elements characteristic of these two concepts have been integrated into the training.

The first section of this dissertation addressed our first goal, which was to provide better insight into the characteristics of Turkish-and Moroccan- immigrant populations with depression in Europe and the mental health care they received. We examined the prevalence, correlates, and symptoms of depression, and the treatment effectiveness, obstacles, and facilitators for therapeutic success in these populations, so that we can improve the attunement of care interventions for these populations in the future. To this purpose, we conducted two systematic reviews of the literature and an observational, retrospective effectiveness study in a naturalistic setting.

Our review of the literature on the prevalence and correlates of depressive symptoms showed that the (pooled) 1-month prevalence for Turkish populations was consistently high, and 3 to 4 times higher than the prevalence of native European populations was. The 1-month prevalence of depression for Moroccan populations was on average similar to the prevalence of the native populations, except among specific subgroups such as older adults. In both groups, ethnic background and perceived ethnic discrimination were important positive correlates of depressive symptoms (risk factors). Religion practice was a negative correlate (protective factor) for Moroccan populations, whereas same-ethnicity social support and an acculturation strategy promoting participation in the receiving society were negative correlates (protective factors) for Turkish populations. Variables such as (female) sex, unemployment, low education, and single marital status were positive correlates of depressive symptoms in some specific samples, but we could not draw more definite conclusions.

Our second review focused on the symptomatic manifestation of depression, the treatment effectiveness and the obstacles and facilitators for access to care and therapeutic success. Findings about symptom profile yielded a mixed picture of depression including mood as well as somatic symptoms. In Turkish groups (of which there was more information available), anxiety symptoms and other complaints such as irritability, hallucinations and suicidal thoughts also were reported as signs of depression. The available literature on treatment effectiveness of (standard or culturally adapted) treatments for depression is still very scarce for Turkish groups and non-existing for Moroccan groups. None of the examined therapies (group CBT, culturally adapted self-help groups, online culturally adapted problem-solving therapy, culturally adapted psychosomatic rehabilitation with and without bioenergetic exercises) have shown sufficient or replicated effectiveness. In the cases in which symptoms decreased, social functioning outcomes, like work reintegration or quality of life, were still problematic. A disadvantaged socioeconomic position, higher level of psychological symptoms at baseline, and negative attitudes towards psychotherapy were common obstacles for therapeutic success, whereas attunement to the individual, cultural, and social needs was considered a facilitator in some studies.

Our reviews also showed that there are still uncovered gaps in the literature concerning sexual diversity, psychological correlates, second-generation, high-SES members,

pharmacotherapy, treatment effectiveness, and Moroccan immigrant populations in other countries than the Netherlands and Belgium. There are also still too few epidemiological studies conducted on access to and utilization of mental health care, drop out of treatment, and the prevalence of depressive disorders in the general population as well as in primary, secondary and tertiary clinical settings. Also, the studies examining interaction effects and mediation and/or moderation models to study intersectionality in these populations were scarce.

The observational study consisted of a pilot, retrospective study with practice-based, routinely collected outcome data to examine the effectiveness of standard CBT and IPT for native, Turkish-, and Moroccan-Dutch patients with depressive symptoms. Due to the scarce literature on the topic, we expected that both treatments would be equally effective for all ethnic groups, but that ethnic minorities would show higher psychopathology levels. Our findings partially supported our hypotheses. We found that CBT and IPT were equally effective in reducing depression severity disregarding ethnicity, but IPT seemed to be related to larger improvement in psychological distress. However, non-native patients and patients with higher baseline psychological distress more often dropped out of IPT. Also, non-native patients reported lower quality of life at posttest than natives, which was not related to treatment type but was not specifically related to other sociodemographic variables. Non-native patients showed overall higher baseline and posttest levels of depression and psychological distress. From this study, we learned that it is important to examine the effectiveness of standard therapies for depression for different ethnic groups separately. Also, in our sample, the high dropout rate indicated that the fit between IPT, one of the first-line therapies for depression, and Turkish- and Moroccan- Dutch patients was poor.

The second section of this dissertation focused on the development and evaluation of diversity-oriented training for MHPs working with Turkish and Moroccan immigrant populations with depressive symptoms. In the first paper covering this topic, we discussed the elements of diversity-oriented training, which included specific ethnocultural insights (population-specific), knowledge about depressive symptoms in general and specific to the target populations (disorder-specific), and the influence of intersecting aspects of diversity besides ethnicity in daily clinical practice for assessing and treating depression. The first step for evaluating this training consisted in comparing MHPs that received training with control MHPs who did not regarding self-reported diversity competence and population-specific knowledge. Our findings showed that the training was relatively well received by the participating MHPs. We also found that the MHPs who received the training reported a temporary improvement in population-specific knowledge and a more stable improvement in self-reported diversity competence.

In the second paper evaluating diversity-oriented training, we conducted a quasi-experimental study comparing the clinical outcomes, satisfaction with treatment, and dropout rates of Turkish- and Moroccan-Dutch patients of MHPs that received diversity-oriented training and supervision every three months vs. patients of the control MHPs who did not receive training and received diversity-neutral supervision. From this study, we learned that diversity-oriented competence training was not related to greater symptom reduction since both groups showed

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an equal decrease over time in general, depressive, anxiety, and somatic symptoms. Both groups also showed equal (low to moderate) satisfaction with treatment. Nevertheless, the diversity-oriented competence group was more satisfied with the psychological health at posttest and was less likely to drop out of treatment. These findings highlight the relevance of training to improve treatment and patient engagement, in particular.

Two important strengths of this dissertation can be mentioned. One strength was its innovative character integrating intersectionality into competence training, clinical practice and the evaluation of both. Another strength is the use of naturalistic settings to add to (the still scarce) body of findings stemming from RCTs and observational studies on the effectiveness of treatment and training. Our findings hold ecological validity since our samples stem from average daily clinical practice with immigrant and native patients of secondary mental health care. The most critical limitation was the low statistical power of most of the reviewed studies and of our own studies, which hindered meaningful multilevel data analyses and limited the robustness of our conclusions. Another limitation, that directly points out at the necessity of future research, is that we did not standardize the therapeutic approaches that would be influenced by diversity-oriented training.

Future research should strive to operationalize diversity competence and to develop better instruments and methods to measure and evaluate it. It is also imperative to conduct more research on the effectiveness of treatment, including moderating effects of ethnicity, social context, and other relevant aspects of diversity in the study design and data analyses. The current trend of following short-term training to improve competence in working with ethnic- and other diverse populations seems to be insufficient to achieve meaningful improvements in mental health care for these groups. It is advisable to embed concepts and management of diversity, intersectionality, culture, race/ethnicity, and equality in the long-term study programs of mental health, clinical psychology, and psychiatry. Integrating intersectionality and diversity competence into clinical practice, training and research increases the complexity and demands more preparation and personal reflection from MHPs. However, diversity-oriented competence training was related to higher odds of treatment adherence and, in the future, diversity competence might contribute to better tailored treatments for depression in immigrant populations, such as the Turkish and Moroccan groups.

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With love,

Gaby

About the author

Gabriela A. Sempértegui was born on July 19, 1987 in Quito, Ecuador. After she finished her high school education at Colegio La Dolorosa in Quito, Ecuador, and her international exchange study year at Connect College in Echt, The Netherlands, she started her study in Psychology at San Francisco de Quito University. In 2008, she made the definitive life switch to the Netherlands, where she obtained her Bachelor's degree in Psychology and her Master's degree in Psychology and Mental Health at Tilburg University (both cum laude). In the subsequent years, she started her research as a junior researcher and later as an external PhD student at the department of Medical and Clinical Psychology at Tilburg University. Under supervision of Prof. Dr. Marrie Bekker and Dr. Jeroen Knipscheer, she worked on examining the effectiveness of diversity-oriented competence training in mental health care for immigrant groups. She also worked as a basic psychologist and completed her postdoctoral education as a mental health psychologist at RINO Zuid and the mental health institution Psychologisch Centrum Lambertushof. She obtained her title and registration as a mental health psychologist (GZ-psycholoog) in 2017. Gabriela has participated as speaker in several national and international conferences such as the *Society for Psychotherapy Research* (Porto, 2012; Jerusalem, 2016), the *World Association of Cultural Psychiatry* (London, 2012), *European Association for Behavioral and Cognitive Therapies* (Ljubljana, 2017), and the *Dutch Conference for Cognitive and Behavioral Therapies* (VGCt najaaarscongres in Veldhoven, 2015, 2017). Furthermore, she has supervised students writing their bachelor and master theses and has given lectures as invited teacher for courses at bachelor's level. Just before finishing her PhD, she started working as a mental health psychologist at the Excellence Center for Body, Mind, and Health (Topklinisch Centrum voor Lichaam, Geest en Gezondheid) of GGZ Breburg.

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