Bidimensional acculturation and psychological distress in Pakistani immigrant women in Norway – A cross-sectional study

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ABSTRACT

Low levels of acculturation may be associated with higher risk of depression and psychological distress. The authors therefore investigated 375 Pakistani immigrant women in Oslo, using a questionnaire concerning demographic variables, self-efficacy, and psychological distress. A bidimensional acculturation variable was constructed. A stepwise logistic regression model was used to investigate the importance of the level of acculturation on psychological distress. In general, low levels of acculturation were reported and this was associated with psychological distress. The authors conclude that the possibility to be bicultural seems important and national policies should promote an integrative approach and multiculturalism.

INTRODUCTION

Immigrants from South Asia are known to have elevated risks of psychological distress and mental disorders (Syed, Dalgard, Dalen, Claussen, Hussain et al., 2006). Especially, Pakistani immigrant women have been reported to have high levels of mental health problems (Gater, Tomenson, Percival, Chaudhry, Waheed et al., 2009; Hjellset, Ihlebæk, Bjørge, Eriksen & Høstmark, 2011).

Both pre- and post-migration factors may be involved in a higher risk of psychological distress in migrants, but post-migration factors may be more important (Thapa, Dalgard, Clussen, Sandvik, & Hauff, 2007). Post-migration factors such as lack of language skills, low level of education, unemployment, social and economic deprivation, lack of social support, and discrimination may lead to stress and poor mental health (Abebe, Lien, & Hjelde, 2014; Gater et al., 2009; Syed et al., 2006; Tonsing, Tse, & Tonsing, 2015; Wiking, Johansson, & Sundquist, 2004). Lack of coping in a new culture may be another post-migration factor associated with psychological distress, and poor coping strategies or self-efficacy have been

reported for immigrant women from South Asia (Daniel, Wilbur, Fogg, & Miller, 2013; Hjellset et al., 2011). Low self-efficacy may be a vulnerability factor in stressful situations, whereas high self-efficacy may buffer stressful environments (Bandura, 1977), and self-efficacy may influence the relationship between stressors and mental health outcomes (Maciejewski, Progerson, & Mazure, 2000).

Changes in attitude, behaviours, values, coping, stress, and cultural identity are often observed when people migrate to a place with a new and different culture (Ryder, Alden, & Paulhus, 2000). This process is generally referred to as acculturation, and can be described as a psychological process of adjustment when an individual from one culture (an immigrant) interacts with persons from another culture (Berry, 1997). Acculturative stress may arise when an immigrant is faced with new cultural and social norms (Berry, 2005).

The importance of taking a bidimensional approach to studies of acculturation has been emphasized, whereby both adaption to the new culture (mainstream culture) and the maintenance of inherited ethnic identity (heritage culture) are equally important (Ryder et al., 2000). In the bidimensional acculturation model, four levels of acculturation may be described (Berry, 1997): integrated, assimilated, separated, and marginalized. 'Integrated' is the highest level of acculturation, whereby an individual both understands and appreciates both the new and the old culture. 'Assimilated' describes a level of acculturation at which a person understands and accepts the new culture but avoids the old culture. 'Separated' describes individuals who do not understand or cannot adapt to the new culture, and instead live and act according to their old culture. 'Marginalized' individuals may have a positive attitude towards the new culture, but lack the knowledge, understanding, and experience needed in their new culture. In addition, they have mixed and often negative feelings about the old culture (Berry, 1997).

The combination of keeping a strong ethnic identity and at the same time developing a strong national identity in the new country has been reported as associated with the best possible adaptation and well-being (Phinney, Horenczyk, Liebkind, & Vedder, 2001). However, there is scarce knowledge of the level of acculturation of Pakistani immigrant women in Norway and the possible association with their experiences of psychological distress. We therefore wanted to investigate the level of bidimensional acculturation among Pakistani immigrant women in Oslo. Additionally, we wanted to investigate whether different levels of acculturation were associated with psychological distress when controlling for education and self-efficacy.

METHODS

We used baseline data from two intervention studies involving Pakistani immigrant women in Oslo (InnvaDiab 1and InnvaDiab 3). Both intervention studies focused on lifestyle and prevention of type 2 diabetes. Baseline data on 187 women were collected from April 2006 to July 2007 in the first study (InnvaDiab 1), and on 188 women from November 2012 to April 2004 in the second study (InnvaDiab 3).

Participants

The inclusion criteria in both studies were: women in the age group 18–65 years, who were born in Pakistan or had Pakistani parents, and had lived in Norway for at least three years. The exclusion criteria were: a history of type 2 diabetes (T2D) for more than 6 months; the following diagnoses from ICPC-2 (International Classification of Primary Care, ICPC-2) K29 (Cardiovascular symptoms or complaints), K84 (Heart disease), K99 (Cardiovascular disease); one or more close relatives (daughter, sister, mother, sister-in-law, mother-in-law)

included in the study; current pregnancy; or not physically able to participate in the lifestyle intervention.

Recruitment

In both studies, recruitment was conducted in a local community, in which c.40% of the population were immigrants. Participation rates in health trials have often been low among South Asian immigrants (Kumar, Mayer,Wandel, Dalen, & Holmboe-Ottesen, 2006). Therefore, a multistrategic recruitment process with emphasis on personal contact was used to recruit Pakistani women, as suggested by Hussain-Gambles et al. (2004). The recruitment process is described in detail by Telle-Hjellset et al. (2013).

Measurements

Trained multilingual (Urdu, Punjabi, Norwegian, and English) study personnel filled out all questionnaires during face-to-face interviews with the participants. The interviews were held in the preferred language of each participant. To ensure that all study personnel asked the questions in the same way, we regularly had a third person to observe the interviews.

The questionnaire covered a broad range of factors, including demographic variables such as age, years of living in Norway, years of education, number of persons in the household, and number of children.

Language skills were measured by a single question: ‘How well to you think you speak Norwegian?’ The question was answered on a five-point scale, from 1 (very good) to 5 (very poor). The variable was categorized into good (1 and 2), average (3), and poor (4 and 5) language skills. Work status was measured with a single question: ‘Are you currently working outside the home?’ The answer categories were ‘Yes’ or ‘No’.

Pakistani identity was measured with a single statement: 'For me it is very important to follow the traditions from my home country' to be answered on a 5-point scale: completely true (1), partly true (2), don't know (3), partly untrue (4), and completely untrue (5). The variable was dichotomized to high (1 and 2) and low (4 and 5) Pakistani identity.

Self-efficacy was measured by the General Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995). The GSE is a psychometric scale that measures optimistic self-belief in the ability to cope with difficult demands in life and is rated on a four-point scale, from 1 = totally wrong to 4 = totally right). A sum score was constructed, and Cronbach's alpha was calculated for the sum score ($\alpha = 0.93$). The scale has been translated and validated for Norwegian populations (Leganger, Kraft, & Røysamb, 2000).

The Hopkins Symptom Checklist (HSCL), a 25-items questionnaire (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), was used to measure psychological distress as experienced in the last 14 days. The questionnaire has been used earlier with Pakistani immigrants in Norway (Thapa et al., 2007). Each item is rated on a 4-point scale, from 1 (not bothered) to 4 (extremely bothered). Subscores (mean) for depression ($\alpha = 0.85$), anxiety ($\alpha = 0.86$), and somatization ($\alpha = 0.81$) were calculated. In addition, a total score (mean) was calculated ($\alpha = 0.93$). A cut-off point of 1.75 on the total score is usually used to identify patients with severe psychological distress (i.e. 'psychiatric cases') (Sandanger et al., 1998).

Acculturation is often measured as a combination of important factors for integration, such as language skills and work status (Blomstedt, Hylander, & Sundquist, 2007; Wiking et al., 2004). The ability to use the native language is reported as one of the most important factors for acculturation (Chaudhry, Hussein, Tomenson, & Creed, 2012). We therefore first constructed a variable for which participants were categorized as high on acculturation if they reported both good language skills (average or high level) and in employment. Other participants were categorized as low on acculturation. Second, a bidimensional acculturation

variable was constructed by combining acculturation and Pakistani identity. Those who reported high acculturation and high Pakistani identity were categorized as *integrated*. Those who reported high acculturation and low Pakistani identity were categorized as *assimilated*. Participants who reported low acculturation and high Pakistani identity were categorized as *separated*, and participants with low acculturation and low Pakistani identity were categorized as *marginalized*.

Statistics

All analyses were carried out with SPSS, version 24.0. Differences between groups were investigated by ANOVA (continuous variables) and Chi-square tests (categorical variables). In order to investigate the main effects of level of acculturation on psychological distress, a stepwise logistic regression analysis was performed. The independent variables were entered into the equation in three successive steps. Year of inclusion was entered in the first block in order to control for this variable. Educational level and self-efficacy were entered in the second block, and bidimensional acculturation was entered in the third block. Odd ratios, 95% confidence intervals, and Nagelkerke R Square were reported. In order to test the significance of the blocks, the Omnibus Test of Model coefficients was used.

Ethics

The study was approved by the Regional Committees for Medical and Health Research Ethics (REC), REC South East, and was performed in accordance with the principles of the Helsinki Declaration. The participants received written and oral information in their mother tongue. All information from the participants was treated as strictly confidential, and the participants gave their written consent to the project before the intervention started.

RESULTS

The majority of participants (91.3%) were born outside Norway and had lived in Norway for an average of 18.5 years (Table 1). The mean age was 40 years, the mean number of children was 3.3, and the mean number of persons in the participants' household was 5.5 persons in the age range 30 and 44 years (Table 1). The participants in InnvaDiab 1 were significantly older ($p = 0.011$), had a lower education level ($p < 0.001$), a lower proportion of integrated individuals ($p = 0.005$), and lower self-efficacy ($p = 0.001$) compared with the participants in InnvaDiab 3, but otherwise there were no significant differences between the two populations (data not shown).

The majority of participants showed low levels of acculturation, as 57.3% could be categorized as separated and 12.3% as marginalized. In total, 23.7% of the participants were integrated participants was 23.7%, and 6.7% were categorized as assimilated. The groups with low levels of acculturation showed less education, higher numbers of household members, and a higher numbers of children (Table 1).

[Insert Table 1 about here]

The level of acculturation was associated with differences in self-efficacy and psychological distress, and integrated participants reported significantly higher self-efficacy compared with separated and marginalized participants (Table 2). Integrated participants also reported significantly less psychological distress on the depression score and total score, than separated and marginalized participants, and less anxiety and somatization than the marginalized participants (Table 2).

[Insert Table 2 about here]

There was also a significant difference between acculturation groups in the proportion of 'psychiatric cases', since 24.7% of integrated participants qualified for this label compared with 40% of the assimilated and separated groups, and 54.3% in the marginalized group (Table 2). Being a 'psychiatric case' was also associated with fewer years of education and lower self-efficacy (Table 3).

[Insert Table 3 about here]

In the logistic regression model, increasing levels of education and self-efficacy were associated with a decrease in odd ratios for being a 'psychiatric case' (Table 4). These two factors explained 25% of the variation in psychological distress. There was a small but significant effect after adding bidimensional acculturation in the model, which increased the explanatory effect of the model to 27.5% (Table 4). Participants who were categorized as assimilated or marginalized had three times the risk of being a 'psychiatric case' compared with integrated participants (Table 4).

DISCUSSION

The main finding was that the level of acculturation in the population of Pakistani immigrant women in Oslo was low. More than half of the women were categorized as separated, while only 23.7% were categorized as integrated. Integrated participants reported significantly higher self-efficacy and less psychological distress on the depression score and total score than separated and marginalized participants. They also reported less anxiety and somatization than the marginalized group. In the logistic regression model, increasing levels

of education and self-efficacy were significantly associated with being a 'psychiatric case', and explained 25% of the variation in psychological distress. There was a small but significant effect after adding the level of bidimensional acculturation in the model, which increased the explanatory effect of the model to 27.5%. The model showed that assimilated or marginalized participants had a three times higher risk of being a 'psychiatric case' compared with integrated participants.

Acculturation is a continuous process of intercultural contact over time (Berry, 2005). In our study, the low acculturation level amongst Pakistani immigrant women was surprisingly low, considering that most of the women had lived in Norway for a long time. Duration of time since immigration has been reported as associated with less sociopsychological stress (Khuwaja, Selwyn, Kapadia, McCurdy, & Khuwaja, 2007). Our findings may indicate that most Pakistani immigrant women do not interact with mainstream Norwegian culture, and this is supported by the findings that only one-third reported to be working.

In terms of acculturative stress, integration strategies are known to cause least stress, and most marginalization, although whether assimilation or separation causes the most acculturative stress depends on the context (Berry, 2005). In our study, there were significant differences in psychological distress between the different bidimensional acculturation groups. More than 50% qualified as a 'psychiatric case' in the marginalized group, compared with only 25% in the integrated group. Being marginalized has been reported as associated with more distress and negative emotions in a number of migrant groups (Kim, 2009; Lieber, Chin, Nihira, Mink, 2001). In our study, marginalized women also showed the lowest level of self-efficacy.

The separated group did not have any elevated risk of psychological distress compared with the integrated group. Obasi and Leong (2009) found that for African immigrants in the

USA, cultural maintenance and traditional beliefs were associated with less psychological distress compared with participation in the new society. Social support is reported to buffer acculturation stress (Crockett et al. 2007), and although we did not include social support in our analyses, it seems reasonable to suggest that separated women might benefit from social support within the Pakistani community, and that this might compensate for lack of social integration. In our study, the majority of participants were first-generation immigrants and the main reason for the Pakistani women to migrate to Norway was marriage. Pakistani women who migrate at an older age have been found to have higher levels of depression, and this might have been due to experiencing more difficulties in adapting to, for example, a new language and culture (Khuwaja et al., 2007). Pursuing a separation strategy and withdrawing from the acculturation arena may reduce cultural conflict and thereby decrease acculturative stress (Berry, 2005).

Interestingly, in our study the assimilated group showed a similar risk for psychological distress as the marginalized group. Assimilation happens when migrants shift to mainly interacting with the new culture without maintaining their original cultural identity (Berry, 1997). The same pattern was found in a study of Chinese immigrants in the USA, as marginalized and assimilated groups both expressed negative emotions and a sense of futility (Lieber et al., 2001). In a study of non-Western immigrants in Norway, social integration measured as good language skills and a high level of interaction with Norwegians seemed to increase psychological distress in women, but not in men (Dalgard & Thapa, 2007). The explanation given by the authors was that there might have been expectations within the migrant community for women to maintain their cultural gender role, and that becoming acculturated was not part of the migrant community's social norm (Dalgard & Thapa, 2007). Several studies have found that first-generation immigrants have more mental health problems than second-generation immigrants (Beutel et al., 2016).

Level of education has been described as a moderating factor prior to acculturation, and coping strategies and resources as important moderators during acculturation (Berry, 1997). As reported elsewhere (Syed et al., 2006), the level of education in our population of Pakistani immigrant women was low, and most participants reported they had only completed primary education. Level of education has been reported as important in order to reduce the social inequality that often occurs between immigrants and natives in a country (Aichberger et al., 2015), which could otherwise lead to psychological distress. The importance of these factors were seen in our study, as the level of education and self-efficacy explained most of the variance in psychological distress. Low level of education has also earlier been described as associated with depressive disorders in Pakistani immigrants (Gater et al., 2009). A high sense of powerlessness has been found associated with psychological distress in earlier studies of non-Western immigrants in Norway (Dalgard, Thapa, Hauff, McCubbin, & Syed, 2006). By contrast, in a study of Mexican American College students, coping moderated the effect of acculturative stress on depressive symptoms (Crockett et al., 2007). Nevertheless, acculturation contributed significantly to the regression model and showed significant associations with psychological distress, as reported in earlier studies (Tonsing et al., 2015).

Methodological issues

The study had several weaknesses that need to be taken into consideration. The major weakness was the cross-sectional design, which made it possible only to describe associations between variables, and no causal interpretation or conclusions could be done. It is plausible that high levels of psychological distress might also affect the level of acculturation. Another weakness might have been the recruitment of participants and the representativeness of the participants. As we did not have any information on the non-participants, we cannot rule out selection bias. The multistrategic recruitment methods might have reduced selection bias, as

the women were approached on several arenas. Although the inclusion and exclusion criteria were the same in the two studies participants in the InnvaDiab 1 trial were significantly older, less educated, less integrated, and reported lower self-efficacy than the participants in InnvaDiab 3. In order to control for this, time of participation was included in the logistic regression model. A further potential threat to the validity of the results is information bias, since many of the women needed to use interpreters in order to fill out the questionnaires. In order to prevent any such bias, we used a number of different interpreters who were trained for the purpose, and we conducted cross-checking of the information given.

In conclusion, the studied Pakistani immigrant women in Oslo, Norway, showed low levels of acculturation and high levels of psychological distress. However, an individual's acculturation strategy is also highly dependent on society's openness and willingness to include and interact with immigrants. Although the Norwegian policy and governmental goal has been to implement an integration strategy, recently there have been political voices in favour of the need to assimilate immigrants and to make them 'true Norwegians'. However, the possibility to maintain a bicultural identity seems important in order to ensure good mental health. National policies should therefore promote an integrative approach and should support multiculturalism.

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