The Gender Gap in Mental Health: Immigrants in Switzerland

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Abstract

Introduction: Many aspects of health differ significantly between men and women, including mental health where there are pronounced differences. Women are more likely than men to seek treatment for psychological problems and depression.

Main: In the literature, two broad explanations are offered for these gender differences. On the one hand, socio-economic factors such as the position in the labor market are highlighted. On the other hand, differences in mental health are associated with aspects of social capital, such as the support individuals receive from others. Immigrant populations are ideal to study these mechanisms, as they display great variance in both dimensions. Here we show that both mechanisms contribute to reported mental health.

Discussion: Statistically speaking, socio-economic factors and the perception that one is in control of one's life can explain substantial parts of the gender differences in mental health. Of the socio-economic variables, the most important covariates are the level of education and labor market status. Indeed, there does not appear to be anything particular about immigrant populations as is sometimes suggested in migration studies.

Implications: These results follow that policies to alleviate the gender gap in mental health will probably be most successful if they focus on improving health and well-being generally rather than focusing on gender or being of immigrant origin. For immigrants and non-immigrants alike, this means facilitating labor force participation such as by aiding reintegration and training for low-skilled women.

The Gender Gap in Mental Health: Immigrants in Switzerland

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Author contributions: MP designed the study; JS and MP ran the analyses; MP, JS and DR interpreted the results; JS wrote a first draft; DR rewrote the draft and did the figures.

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Introduction

Natia is a twenty-nine years old immigrant woman working in Switzerland. Although she was able to find work, she suffers from depression which affects every aspect of her life. Depression, just like persistent feelings of sadness and loneliness, is common among recent immigrants – thought to be linked to the processes and challenges of settling in a new environment (Holtmann & Tramonte 2013). For Natia things got so bad that she recently thought professional help was needed, and from her psychiatrists she learned that women are more likely to report poor mental health than men (Cherepanov et al. 2010, Read & Gorman 2011).

While gender gaps in mental health are commonly observed, a focus on immigrants can be helpful to understand reasons for gender differences in mental health more generally.

Statistically speaking, the study of immigrants is interesting as they offer more variance. From social isolation to full participation in society, immigrants vary in their circumstances just as much as they vary in their propensity to report mental health problems. Just like in the general population there are marked gender differences among immigrant in mental health, with immigrant women reporting poor health more frequently than immigrant men. In this chapter, we make use of the observed variation to study two mechanisms behind mental health problems.

When Natia is unable to go to work, she is only dimly aware that mental health problems are of great importance, representing what has been called "the global health burden" in particular for women who are more at risk from suffering from poor mental health (Gülçür 2000, 46). This point will be discussed in a further section (see *the Gender Gap in Mental Health*).

The literature offers different explanations for the gender gap in mental health. Some studies highlight the association between mental health and macro-social variables such as income, marital status, or employment status (Madden 2010). Others argue that gender roles are an important reason as to why women tend to report poorer mental health than men (Weich et al. 2001). In this chapter, we add immigration as an additional concern. The motivation is to focus on a subpopulation where poor mental health is relatively more common, and where – crucially – there is great variation in the variables that are associated with poor mental health. What is more, in migration studies the poor mental health of immigrants is frequently highlighted, especially that of immigrant women (Berchet & Jusot 2010, Nazroo 1997, Cooper 2002). For instance, in a study on migration-related health inequalities, Malmusi and al. (2010) showed that immigrant women of all social classes are more likely to report a poorer health than men and to be discriminated on the labor market. Holtmann & Tramonte observe that immigrant women often follow a different path when arriving in a country: "Many do full-time care-work at home supporting family members, some secure paid employment outside the home, while others pursue higher education and training" (2012: 2). Such diverging paths can lead to great differences in terms of emotional experiences. Those staying home may feel isolated, while others may feel integrated when working. This chapter speaks both to the literature on immigrants' health and women's health more generally.

With regard to the health of immigrant women, Moussa & Pecoraro (2013) highlighted that low levels of education and a lower status in the labor market can statistically explain the gender differences among immigrants. Similarly, Cherepanov et al. (2010) observe that the self-reported health of immigrants varies significantly by socio-demographic and socioeconomic status. Indeed, socio-demographic factors like age, the age of arrival in Switzerland, rural or urban residence may explain gender differences in terms of health. The "healthy migrant effect" is a well-known hypothesis, stipulating that recently arrived immigrants are generally healthier than the native population. This health effect, however, seems to deteriorate rapidly as immigrants settle in the country of destination (Malmusi & al. 2010, Uretsky & Mathiesen 2007, McDonald & Kennedy 2004). Once settled, the immigrants' status in the labor market, education, income, or their proficiency of a national language may be crucial in explaining gender differences in terms of health. Holtmann & Tramonte observed that "the experiences of women differ from those of men in the contexts of the labor market, the community, and a higher education" (2013:3). Accordingly, immigrant women in the labor force report lower rates of mental distress than women staying home. Given that access to language learning and barriers to integration can be quite high; this difference is generally interpreted in terms of the relative isolation of immigrant women staying home.

Attias & Donfut (2006) highlight that the perception of health varies by the socioeconomic level of individuals, something also observed for immigrants. Given that women tend to have lower individual incomes than men, this can lead to a gender gap in health (Cherepanov et al. 2010). In particular, different variables related to labor force participation are related to health, such as income and education (Shields & Weathly Price 2005, Llena-Nozal 2009, Cottini & Lucifora 2010). That said, women may be discriminated with regard to educational achievements, a fact that can acerbate health outcomes. Older studies highlighted the association between human capital and health (Mushkin 1962, Becker 1964, Fuchs 1966; see also: Bracke et al. 2013, Premji & Lewchuck 2013). Grossman (1972a, 1972b) argues that income improves health, adding healthy workdays, while education improves productivity. In this sense, health can be regarded as an investment and human capital more generally. It follows that if women have on average lower levels of education and lower incomes, their health is affected. A different kind of investment comes to the fore in studies that highlight proficiency in the language of the country of destination. It facilitates communication with health care providers, both in and out of hospitals, and eases the understanding of written information, booklets, and brochures, all of which are associated with improved health outcomes. Given that language proficiency increases with active labor force participation, immigrant men have an advantage. In short, socioeconomic factors and language proficiency can serve as explanations for gender differences in terms of mental health.

Drawing on the concept of social capital, a different explanation for the gender gap in health can be formulated. Here we follow Bourdieu's (1980) conception of social capital focusing on the importance of friends and family as a support network. Bourdieu highlights that individuals are part of social groups, but group membership is neither given nor definitive. Social relations change and evolve over time, leading to different configurations of social networks over time. This evolution is particularly apparent in the case of international migrants, where migration tends to come with a loss of ties in the country of origin. Even where these ties are maintained – such as by means of internet communication –, the ties between individuals tend to become weaker and support available through existing networks dwindles (Ruedin, 2007; Ruedin, 2011). Instead, immigrants face the challenge of creating a new network, something facilitated by active labor force participation. Indeed, Zhao (2010) observes that immigrants with frequent contact with their friend's networks are more likely to report good health.

Bouchard (2005) expands on Bourdieu's conception of social capital, highlighting two mechanisms by which social networks can promote health. Networks can deepen the personal and self-esteem of individuals in emotional and cognitive ways. It follows that women lacking family or friend networks may be associated with a poorer health. Bouchard observes that people who are not integrated in a social network are two to five times more likely to die of all causes of mortality than those who are well integrated. Cooper (2002:694) summarizes the role of social capital as follows: "An extensive literature testifies to the fact that men and women differ markedly in social roles within the family and that gender differences in type of occupation, […], often place women at a disadvantage with men". Social capital is then a key aspect of mental health for each individual.

Data and Methods

In this chapter, we use data from the 2010 *Gesundheitsmonitoring der Migrationsbevölkerung in der Schweiz* (GMMII). This survey contains a sample of the six largest immigrant groups in Switzerland (Guggisberg et al., 2011). The immigrant sample consists of 1,800 individuals from Portugal, Turkey, Serbia, and Kosovo. Three additional

samples of 400 persons each are also available, focusing on newly naturalized people from Turkey and Serbia, and asylum seekers from Sri Lanka and Somalia respectively. We do not consider the sample of asylum seeker in the multivariate analysis, because the asylum application indicates that many of these individuals have suffered multiple traumas due to war or persecution, which renders this group incomparable to the others.

In the multivariate analysis, we use a linear probability model which can be presented as follows:

$$P(y_i = 1 | G_i, \mathbf{x}_i) = \alpha G_i + \mathbf{x}_i \boldsymbol{\beta}$$

where the conditional probability for an individual i of being in a specific health condition y_i (binary form) is modelled as a linear function of independent variables (G_i = female, $\mathbf{x}_i$ = other individual characteristics).The α coefficient measures the gender gap, namely the change in the probability to reach a given state of health $P(y_i = 1)$ when G_i changes from 0 (= male) to 1 (= female). The advantage of the linear probability model over other models for binary outcomes is the readily interpretable coefficients reported in this chapter.

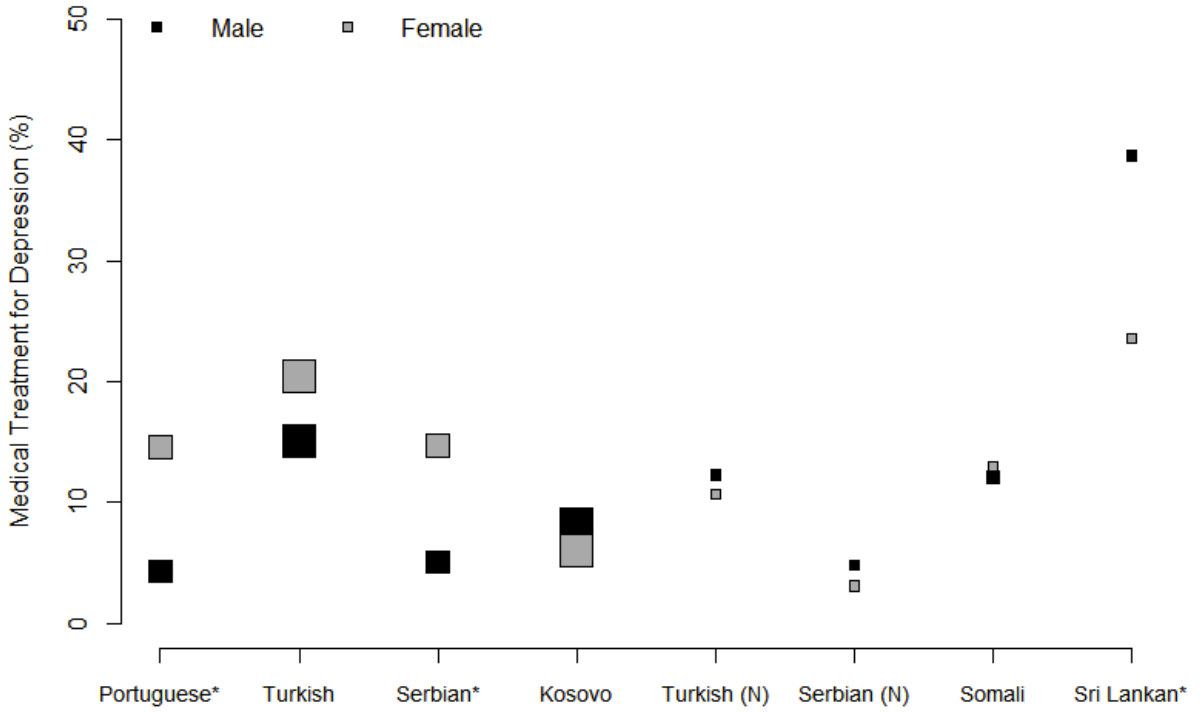
The basic model controls only for demographic characteristics, while the other models systematically consider additional factors so as to isolate their influence on mental health outcomes. Two dependent variables are used to ascertain the robustness of the reported finding. Both these variables are self-reported assessments of mental health. The first health outcome is whether an individual has received medical treatment for depression during the past 12 months. The second health outcome is whether an individual has received medical treatment for psychological problems in the past 12 months.

For the explanatory variables, a base model and six additional blocks of variables are considered. Each block of variables was chosen to narrow down which of the outlined mechanisms may be at play in shaping gender differences in health outcomes. The base model includes demographic characteristics: age, nationality or national origin, migratory status (place of birth, age when first arrived in Switzerland), and the level of urbanization of one's place of residence. The first block of variables covers socio-professional characteristics: level of education, status in the labor market (employed, unemployed, inactive), and residence permit. The second block consists of a variable on the proficiency of the local language. The third block of variables considers the situation of the household: household structure, number of children under 15, having a partner in Switzerland or abroad. The fourth block of variables covers social support: visits from or to family member, visits from or to friends. The fifth block of variables covers the feeling of being in control of one's life: an inability to overcome problems, the impression of being tossed in all directions, feelings of having little control over what happens, and being overwhelmed by problems. The sixth block of variables covers health literacy: knowing the telephone number of the emergency services, knowing whether HIV can be cured, whether the respondent discusses their visits to doctors with others, and whether respondents recommend a person to consult a doctor or a psychologist if she has particular symptoms such as heartburn, or a lasting cough.

The Gender Gap in Mental Health

While the gender differences reported in Figure 1 draw on self-reported health, there is evidence that these differences exist, and that women indeed exhibit higher rates of mental pathology than men (Goldberg & Williams 1998, Bebbington 1998, Weich et al. 2001).

Figure 1: Gender Gap in Mental Health by Nationality



Notes: Medical treatment for depression during the past 12 months. The size of the dots corresponds to the sample size; * = gender gap is statistically significant at 5%; (N) refers to naturalized citizens. Authors' own elaboration on the basis of Moussa and Pecoraro (2013).

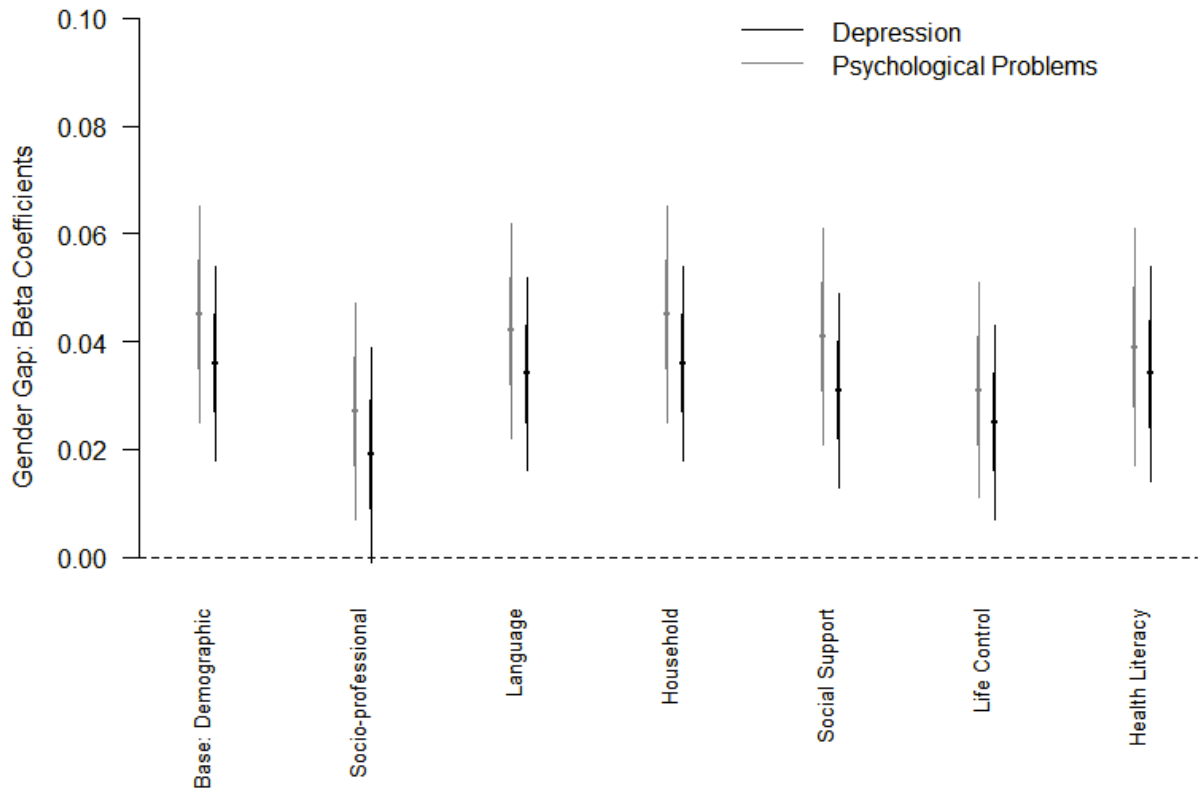
The figure makes it apparent that there are differences between immigrant groups in the extent to which this gender gap exists. The picture of gender differences is largely the same for the two indicators of mental health: depression and having psychological problems. Figure 1 highlights that the gender gap in mental health is largest for immigrants from Portugal, Turkey, and Serbia. Women from these countries were more likely than men from the same country to have received medical treatment for depression in the past 12 months. Interestingly, the gender gap for naturalized persons is hardly existent. If anything, men seem to be *more* likely to receive treatment for depression. At first sight, immigrants from Sri Lanka appear to be outliers, with men receiving treatment for depression more often than men. However, the percentage of Sri Lankan women affected by depression is larger than the percentage for any other nationality under consideration. In fact, nearly a quarter of Sri Lankan women report receiving treatment for depression. For Sri Lankan men, the figure almost reaches 40 per cent, probably due to the fact that men were more exposed to the political and military struggle in Sri Lanka that lead to their asylum applications. Put differently, for both Sri Lankan men and women post-traumatic depression is a likely explanation. This makes it difficult to compare immigrants seeking asylum with labor immigrants that form the majority of immigrants in Switzerland. For this reason, the multivariate analysis excludes asylum seekers.

The gender gap reported for depression can also be found for the treatment for psychological problems: Women are more likely to receive such treatments than men, especially women from Portugal (12%, compared to 2% for men), Turkey (15%, compared to 12% for men), and Serbia (13%, compared to 6% for men). In contrast to depression, the gender gap seems to persist among naturalized Turks (9%, compared to 5% for men). Asylum seekers from Somalia and Sri Lanka are much less likely to seek treatment for psychological problems than depression – a finding that applies equally to men and women. To make sense of the factors

that influence mental health outcomes – and with that the reported gender gap – in the following, we use multivariate regression analyses to statistically explain the gender gap in mental health.

We follow two modelling strategies. In the first case, we begin with the base model that only considers demographic variables and subsequently add just one of the six blocks of explanatory variables (Figure 2). By testing each block of explanatory variables separately, we can examine which of the different mechanisms is most likely to reduce the gender gap in mental health, after taking into consideration demographic characteristics in the base model. Seen differently, each block of variables that can statistically explain the gender gap is a factor that explains the health disadvantage of women. The estimated coefficients shown in Figure 2 identify the extent to which each block of variables can statistically explain gender differences in mental health. By comparing the different factors, it is possible to gauge which of these factors has the greatest impact on gender differences in mental health. Figure 2 includes separate results for depression and receiving treatment for psychological problems. By including two different dependent variables, we are able to ascertain the robustness of the reported findings, apparent by the similarities between the two sets of models.

Figure 2: Gender Gap in Mental Health: One Factor at Time



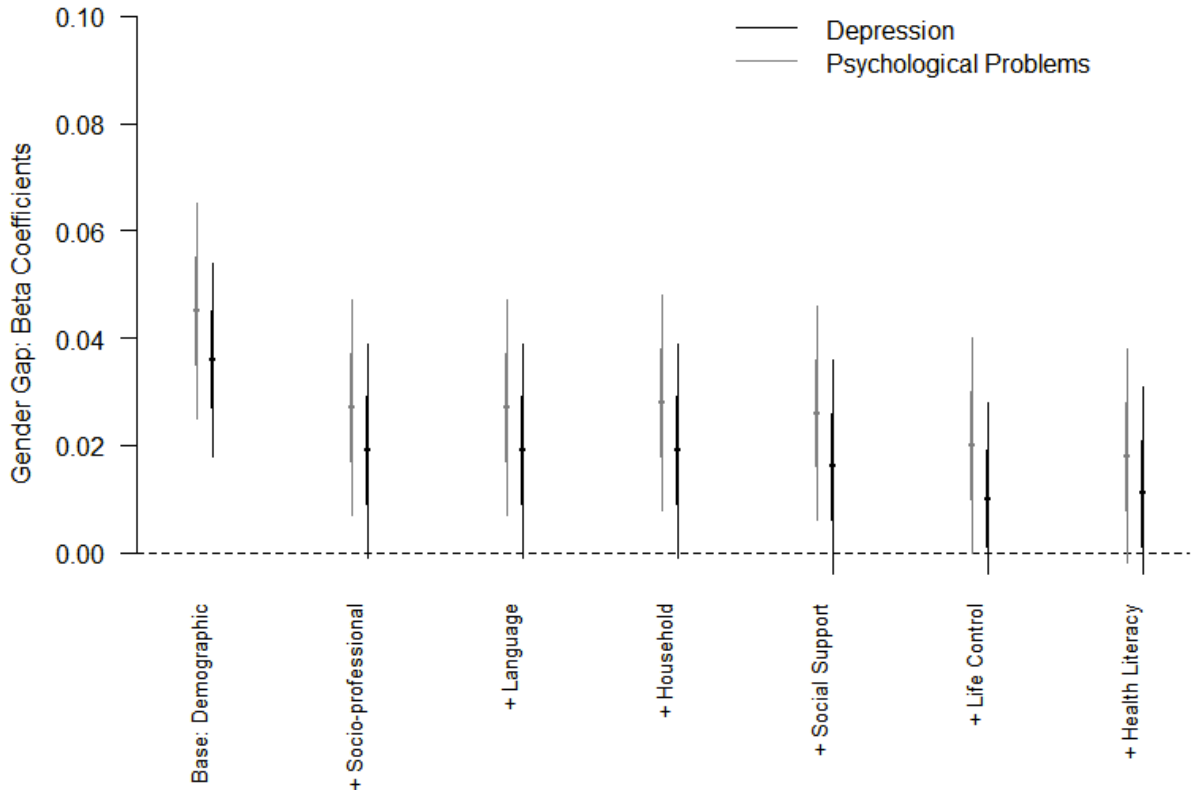
Notes: The dots are the beta coefficients for immigrant women, with immigrant men being the reference category. All estimated coefficient are statistically significant at 5%. The thick lines correspond to 1 standard deviation, with the thin line indicating 2 standard deviations. In each case the indicated block of variables is added to the base model in an exclusive manner. N=2,581.

Figure 2 makes it apparent that once demographic variables are taken into consideration, women remain disadvantaged in terms of mental health. This is apparent by the positive coefficients in the figure. The fact that the lines indicating the standard deviations do not cross the zero line highlights that the reported gender gap is statistically significant. This is

true for depression (red) and psychological problems (blue). Given the linear probability model used, it is possible to interpret the magnitude of the estimated coefficients in Figure 2 with ease: the distance between the zero line and the coefficient is the gender gap in mental health. In the base model, the probability that women receive treatment for depression is 4.5 percentage points higher than for men. In the case of psychological problems, the gender gap is slightly smaller, with women having a probability of receiving treatment that is 3.6 percentage points higher.

Considering the different blocks of explanatory variables in Figure 2, it is apparent that none of them is able to explain the gender gap in mental health on its own. Depending on the block of variables considered, the *reduction* in the gender gap varies a bit. For instance, when controlling for socio-professional characteristics such as the level of education and labor market status, the gender gap is nearly halved. In this case, the probability of women receiving treatment for depression is reduced to being 1.8 percentage points higher than for men. Indeed, of the factors considered, socio-professional characteristics on their own are able to reduce the gender gap most. Another significant reduction can be observed for the block of variables revolving around questions of being in control of one's life. In this case, the gender gap is reduced by around 30 per cent. The variable block on health literacy accounts for around 0.6 percentage points of the gender gap.

Figure 3: Gender Gap in Mental Health: Accumulation of Factors



Notes: The dots are the beta coefficients for immigrant women, with immigrant men being the reference category. The thick lines correspond to 1 standard deviation, with the thin line indicating 2 standard deviations. The six left-most coefficients for depression at statistically significant at 5%, the last coefficient at 10%; the four left-most models for psychological problems are significant at of 5%. The indicated blocks of variables are added in a cumulative manner, beginning with the base model including only demographic variables. N=2,581.

The models on receiving treatment for psychological problems suggest comparable influences for the different factors considered. Once again, socio-professional characteristics

have the largest impact, corresponding to a reduction in the gender gap of 1.7 percentage points. Just as in the case of depression, this is a reduction of the gender gap by half. As with depression, the block of variables on being in control of one's life is significant, leading to a reduction in the gender gap of 1.1 percentage points. By contrast, the other blocks of variables can only account for very small amounts of the gender gap.

In the second modelling strategy, we also begin with the base model, but this time the different blocks of variables are added in a cumulative manner (Figure 3). This way, we can examine whether the combination of the factors identified in the literature can statistically explain the gender gap in mental health, or whether there is something inherent to gender differences when it comes to mental health. Indeed, when the different blocks of explanatory variables are added sequentially, the gender gap tends to zero. This is visible by the diminishing distance between the zero line and the coefficient point estimates as we move to the right of the figure, especially in the case of treatment for psychological problems. Indeed, for psychological problems the difference to zero is no longer statistically significant after the fourth block of explanatory variables is added. For depression, the cumulative consideration of different blocks of variables also diminishes the gender gap in substantive terms, although the difference to zero remains statistically significant at a level of 10% when all the variables considered are included. Put differently, a gender gap in mental health remains despite considering all of a wide range of explanatory variables.

Both in the case of depression and psychological problems, the same variables lead to a significant decrease in the gender gap in mental health. In particular, socio-professional characteristics stand out – the level of education, the status in the labor market, and one's residence permit. The gender gap outlined in Figure 1 is thus largely a reflection of the fact that immigrant women tend to have lower levels of education, are more likely to be economically inactive, and have a short-term residence permit. All these factors affect the personal network, which in turn seems to affect mental health outcomes.

Discussion

This chapter has explored the gender gap that exists in mental health. Women are generally more likely to report poor mental health than men. In the literature a range of explanations are suggested, and this chapter put them to the test. The focus was on the gender gap in immigrant populations because they have greater variance in the key variables of interest such as socio-professional characteristics and social capital. In this sense, the study of immigrants in this chapter helps understanding gender differences in the general population.

Socio-professional characteristics such as education and access to the labor market are the most important factor in explaining the gender gap in mental health among immigrants in Switzerland (compare Cherepanov, 2010). Both for depression and psychological problems, this block of explanatory variables was able to statistically explain the largest share of the gender gap. With an eye to eliminating gender differences in health outcomes, facilitating women's access to the labor market seems important. For immigrant populations, this also means encouraging participation in social and economic life as part of the mainstream society. Participation in social life can encourage value change and more importantly social support. It can also give confidence to women who wish to participate in economic life by educating them about the support available to them.

The second most important factor was the block of explanatory variables that captures the extent to which respondents felt in control of their lives (compare Bouchard, 2005). As with socio-professional characteristics, the actions in this area seem to revolve around what can be considered women's empowerment. Again, access to the labor market may be an important

factor, as it grants women more control over their everyday affairs. In the case of immigrants, programs that help overcome language barriers are important, as they are directly related to the control individuals exert over their lives as well as feelings of isolation and exclusion. This can take the form of translations made available in hospitals, or language courses more generally. Furthermore, given the tendency of women to be responsible for family and care, policies that help reconcile family and career seem commendable.

While health literacy was able to explain only a small part of the gender gap in mental health, it is highlighted because it can relatively easily be addressed by public campaigns. Targeted campaigns may focus on specific groups in society, such as women from a particular immigrant group if there is evidence that these have particular needs. It seems likely that a general increase in health literacy has the consequence of reducing the gender gap in mental health, which is why this factor seems generally important.

The analyses in this chapter provide partial support for both mechanisms identified in the literature: First, we can confirm the importance of socioeconomic factors in explaining gender differences in mental health. In particular, the level of education, active participation in the labor market, and speaking the local language are significant covariates that statistically explain the gender gap in mental health. Second, with the feeling of being in control of one's life, we can also confirm the importance of social capital in explaining gender differences in mental health. Put differently, those individuals like Natia who have no support network are much more likely than their counterparts with support network to suffer from poor mental health such as depression or psychological problems. At the same time, variables that capture the household structure were not significant covariates for the gender gap, suggesting that not all aspects of social capital are equally important for gender differences in mental health.

In the case of depression, we observed a persistent gender gap. Even though the cumulative consideration of different explanatory variables helped reduce the gender gap in mental health, a small but significant gender gap remained. Cherepanov et al. (2010) argue that such persistent gender differences might reflect response biases in surveys, with women responding differently to the same questions than men. Such response biases could be identified with tests of measurement invariance (Davidov et al. 2010), something future research should pay particular attention to. At the same time, a persistent gender gap may indicate that variation is incompletely measured, or other – unmeasured – factors explain the gender gap. As outlined above, the focus on immigrants in this chapter should increase variation, but the role of additional variables can never be ruled out. This is particularly the case for aspects of social capital, where the variables suggested by theoretical accounts are unavailable in the survey.

The finding that participation in the labor market is so important for explaining the gender gap in mental health warrants further consideration. It is a fact that men are more likely to participate in the labor market than women, particularly in Switzerland with its relatively limited social security system. This means that labor force participation is relatively strongly correlated with gender, leading to challenges in modelling (Moussa & Pecoraro 2013). Our tests indicate that this is not a major concern for the models presented.

Implications

While concerned with gender differences in mental health more generally, this chapter also contributes to our understanding of mental health outcomes of immigrant groups. The mechanisms highlighted in the literature and the analyses in this chapter suggest that the

correlates of poor mental health for immigrant groups are not different from what is reported for the general population. With socio-professional characteristics and social support networks, the mental health of immigrants is shaped by the same factors, but in both areas there are some immigrants who are in particularly vulnerable positions. With a regular occupation, Natia could be expected to have good mental health, but it is the kind of work – cleaning offices at an hourly rate – that matters. Without a good support network, Natia had nobody to fall back on when depression set in, just like many immigrants – particularly women – live in relative isolation and exclusion. While for Natia receiving treatment for her depression is of priority, in the long terms she would benefit from any program that helps her to escape the precarious lifestyle many immigrants lead, including language courses that could open up new possibilities on the labor market and empower immigrant women more generally.

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