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WOMEN'S HEALTH REPORT

BELGIUM, 2024

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With the collaboration of the Institute for the equality of women and men

EXECUTIVE SUMMARY

Gender and sex have a significant impact on health, as a result of both biological and socially shaped differences and inequalities. Historically, the health of women and girls has often been overlooked due to discrimination. As a result, women and girls are prevented from attaining their full potential of health. Today, there is still a clear underrepresentation of women in clinical studies and inadequate attention to sex and gender differences in research. Women are also more likely to be under-treated and misdiagnosed in clinical settings compared to men, even though women have more contact with healthcare professionals.

This report includes not only health issues that are unique to women, such as endometriosis and menopause but also conditions that affect women differently or disproportionately compared to men, like cardiovascular disease. It provides an overview of the epidemiology of women's health in Belgium.

The findings show that gender differences in mental health begin at an early age with adolescent girls reporting psycho-emotional symptoms more often than boys. Girls also tend to engage less in physical activity compared to boys, a disparity that can persist into adulthood.

As girls grow into women of reproductive age, they face challenges such as infertility, issues with menstruation and often underdiagnosed chronic diseases that can affect their quality of life, such as endometriosis and polycystic ovary syndrome. Perinatal mortality is low in Belgium compared to other countries, but that benefit is not equally distributed to all women. Lower education, unemployment, single motherhood, migrant status and lack of healthcare coverage put women in Belgium at greater risk of perinatal complications like preterm birth and low birth weight. Post-partum depression, an often debilitating condition, has not been extensively studied in Belgium, but its prevalence is estimated between 10% and 27%.

Women of working age also face unique challenges. Since the 1960s, women's participation in the Belgian work force has been growing, but there remain important differences in the types of jobs performed, the amount of time spent on the job and the balance between paid and unpaid domestic work between women and men. Women have a higher exposure to workplace bullying, harassment (including sexual harassment) and discrimination than men which can have a negative impact on mental health. They also experience more physical symptoms including musculoskeletal disorders.

In Belgium, women have poorer mental health than men. The prevalence of anxiety and depression is higher among women than men. The suicide mortality rate for both genders is one of the highest in Europe but, while the mortality is higher in men, women in Belgium attempt suicide more often than men.

The leading causes of death for women in Belgium are cardiovascular diseases and cancers. While women tend to have a better risk profile than men; smoking at lower rates, fewer developing diabetes, lower rates of obesity and better dietary habits, they are also affected by under-recognized risk factors unique to women including premature menopause, gestational diabetes, hypertensive disorders of pregnancy, preterm delivery, and polycystic ovary syndrome. When these risks are combined with a low screening rate, especially for some types of cancer (e.g. breast and colorectal cancers), this can contribute to a later diagnosis and higher rates of complications and death. For breast cancer, screening is organized in all three regions, but the participation rate remains fairly low in 2022, especially in the Walloon Region (46%) and the Brussels-Capital Region (43%) compared to the Flemish Region (64%). Only Flanders currently has an organized cervical cancer screening program.

Women in Belgium live longer than men, but the additional years are not always years lived in good health. Older women in particular are more affected by musculoskeletal disorders, fractures, and osteoporosis and are less physically active than men of the same age. Perimenopause and menopause, unique to women and affecting all women, can contribute to a reduced quality of life. This is in part because, while treatable, there is still a stigma attached to discussing or seeking treatment for their symptoms. Women experience a higher rate of cognitive impairment and dementia.

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ABBREVIATIONS

ART	Assisted Reproductive Technology
ASMR	Age-standardized mortality rates
BAMM	Belgian Analysis system for Maternal Mortality
BELRAP	Belgian Register for Assisted Procreation
COCOF	Commission communautaire française
COPD	Chronic Obstructive Pulmonary Diseases
COVID-19	Coronavirus disease 2019
CVD	Cardiovascular diseases
DALY	Disability Adjusted Life Years
EU	European Union
EVRAS	Education à la vie relationnelle, affective et sexuelle
FEDRIS	Federaal agentschap voor beroepsrisico's - Agence fédérale des risques professionnels
GPs	General Practioners
HBSC	Health Behaviour in School-aged Children
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HRQOL	Health-Related Quality Of Life
HRT	Hormone Replacement Therapy
ICSI	Intra-Cytoplasmic Sperm Injection
ILO	International Labour Organization
IMA-AIM	Intermutualistic Agency
IUD	Intrauterine Device
IVF	In Vitro Fertilization
KCE	Federaal Kenniscentrum - Centre fédéral d'expertise
NCDs	Non Communicable Diseases
NICE	The National Institute for Health and Care Excellence, England
PCOS	Polycystic Ovary Syndrome
PFAS	Per- and poly-fluoroalkyl substances
RIZIV-INAMI	National Institute for Health and Disability Insurance
SDG	Sustainable Development Goals
STIs	Sexually Transmitted Infections
UK	United Kingdom
WHO	World Health Organization
YLD	Years lived with disability
YLL	Years of life lost

WHAT IS WOMEN'S HEALTH?

Women's health encompasses health issues that are unique to women (e.g. menopause or pregnancy), as well as diseases and risks for which women are differently or/and disproportionately affected for any reason (e.g. cardiovascular disease)[1]. The health of women and girls has been historically overlooked, in part due to discrimination rooted in sociocultural factors[2]. Traditional social norms assign specific roles to men and women (often narrowly focused on their reproductive roles) which can decrease opportunities, reinforce power imbalances and contribute to disparities in health throughout the lifecourse[2].

There is inadequate attention to sex and gender differences in research

Female bodies have historically been understudied and underrepresented in health research3. Women are not sufficiently included in clinical studies and inadequate attention has been given to sex and gender differences in research[4,5]. Most knowledge in the medical sciences is based on research done on white men to the exclusion of other groups[6]. The justification for this exclusion was the assumption that the female body is similar to the male body apart from size and reproductive function. However, the results of numerous newer studies highlight sexual differences in the mechanical functioning of the heart, in the capacity of the lungs, in the immune system, in the perception of pain, in the metabolization of drugs, etc[7].

More recent research has recognized differences between women and men in terms of aetiology and clinical presentation, especially for cardiovascular disease, however, this knowledge has not been integrated fully into clinical practice or research methods[5,6,8]. Sex differences in many other diseases (i.e. Alzheimer's disease, lung cancer, etc) are still poorly understood as are the sex-specific interactions between risk factors (tobacco, alcohol, overweight and obesity, physical activity) and non-communicable diseases9. In addition, diseases and conditions specific to women, such as premenstrual syndrome and perimenopause, remain underfunded and therefore understudied[5,7].

The authors of this report acknowledge that people have diverse genders and gender non-conforming identities. Throughout this document, the following concepts are used:

Sex refers to the different biological and physiological characteristics of a person and is assigned at birth. These sets of biological characteristics are not mutually exclusive, there are individuals born with physical or biological sex characteristics who do not fit traditional definitions of female and male (intersex). Sex differences can be observed in chromosomes, gene expression, hormones, immune system and anatomy. These differences produce sex-specific conditions like cervical cancer (women) and prostate cancer (men)[3].

Gender refers to the social and cultural construction of norms and behaviours attributed to people differently on the basis of their sex assigned at birth. Gender identity refers to a person's individual experience of gender, which may or may not correspond to the person's designated sex at birth[4]. For health, gender differences and stereotypes influence the exposure to risk factors, health-seeking and risk-taking behaviours, access and use of health information and health services, and experience with health care. These differences result in different health outcomes[3].

In most databases, individuals are identified based on their sex assigned at birth. Therefore, the information presented in this report often refer to sex even though the differences may be due to gender.

There is a lack of treatment protocols specific to women

This lack of knowledge of the female body and the potential negative impacts on female health is augmented by a lack of treatment protocols specific to women. Women are more likely to be under-treated or mistreated if using protocols and treatments that were developed on men. Medication dosages that were developed based on the male body can in some cases be dangerous for women[10]. A recent review showed that prescribing equal doses of a number of pharmaceutical agents to women and men leads to more adverse reactions for women[11]. In general, women are 1.5 to 2 times more likely to develop an adverse reaction to prescribed drugs than men[12,13]. Women are rarely included in clinical trials, and when they are, it's often limited to later phases where the basis is already known[3]. Consequently, medications available on the market might lack efficacy or even pose adverse effects specifically for women[11,12,14].

There are also situations where the way the female body metabolizes medications can be different than in men. For instance, the menstrual cycle has been shown to affect how antipsychotics, antihistamines, antidepressants and antibiotics are metabolized in the female body[7]. Conversely, some medications and treatments can affect hormones and thus a woman's menstrual cycle as with the recent COVID-19 vaccines, an effect only noted after the vaccine had been rolled out to the population[15]. Conditions specific to women often do not have adequate treatment (e.g. endometriosis, menstrual pain and premenstrual syndrome) and very few medications are made available to pregnant women because medication development studies do not include them in their safety phase.

Correct diagnosis is hampered by a lack of knowledge and gender stereotypes

For many diseases, the time to diagnosis is longer for women than for men with consequences for their treatment and health. The reasons for this are complex and go beyond differences in anatomy and biology into health care culture and the way women are perceived[16–18]. For similar symptoms, women are less likely than men to be prescribed diagnostic tests and symptoms themselves can present differently in women. If these differences are not recognized by clinicians this can contribute to a downplaying of symptoms and misdiagnosis[9,19].

Women are also more likely to receive a psychiatric diagnosis for a wide range of health problems including pain, whereas men are more likely to be prescribed diagnostic tests[20–22]. Indeed, women's pain is often downplayed and not taken as seriously by clinicians as that of men in a phenomenon known as the pain gap16. The pain gap can lead to a substantial lag time to correct diagnosis16 as is the case with endometriosis (the average delay for diagnosis from symptom onset is 6.7 years)[23].

These biases have negative effects on men as well. For example, osteoporosis and breast cancer, which are more common in women, are often misdiagnosis or diagnosis has a long delay in men. Mental illnesses, such as depression, anxiety and eating disorders are more likely to be misdiagnosed and untreated in men[24]. Traditional gender roles can also affect healthcare use. Men are consistently less likely to visit a doctor than women, which might be linked to a social norm that men should be strong and not complain about physical and psychological discomfort[24].

WHY A WOMEN'S HEALTH REPORT?

This report aims to make an overview of the available epidemiological evidence on women's health and provides a baseline understanding of some of the key issues in the health status of women in Belgium today. Women's health is a broad topic and this report is not meant to be exhaustive but rather seeks to stimulate discussion and further exploration by focusing on a few highlighted issues. Health topics were selected based on the impact they have on women, their public health importance, and the availability of data. In writing this report, a number of areas stood out for the lack of information or the underuse of collected data on issues unique to women in Belgium.

Efforts are needed at different levels to reduce this knowledge gap, collect relevant data, and analyse it to improve women's health. Research is not only needed to understand the physiological differences between sexes and how they impact health, but also the surrounding social norms that drive gender-based inequalities. Gender and health is emerging as a recognized field in different university medical schools, including in the Netherlands, but not yet in Belgium[24]. Research findings in this field are growing but translating them into clinical practice is a slow and uneven process. Besides engaging with health care professionals, efforts are also needed to raise awareness among the general public with campaigns and action plans[24]. In 2023, more than two-thirds of people in Belgium reported being worried by gender inequalities[25]. The European Institute of Women's Health, through its 2024 Manifesto, calls for an EU Strategy for Women's Health to reduce health inequalities and provide equitable health for all women[26].

"(...) sex is not the reason women are excluded from data. Gender is. In naming the phenomenon that is causing so much damage to so many women's lives, I want to be clear about the root cause and, contrary to many claims you will read in these pages, the female body is not the problem. The problem is the social meaning that we ascribe to that body, and a socially determined failure to account for it." Caroline Criado Perez in Invisible Women (2019, p. xiv)

How was this report developed?

The report starts with an overview of the state of health of women in Belgium, touching upon important aspects of health in the general population. This overview presents a summary of key insights that are further developed on the healthybelgium.be website.

The core of the report focuses on health topics that are particularly important for, or that are unique to, women's health. It takes a life-course approach to its narrative, beginning with adolescence and ending with older age. Each section of the life-course first highlights important key messages and then goes deeper into health topics, their contexts and the main findings regarding those topics. Finally, some policy implications are presented and discussed. Several criteria were used when selecting health topics:

- The topic is specific to women (e.g. reproductive health, maternal and perinatal health, and menopause);
- The topic is more prevalent in women than in men (e.g. mental health, osteoporosis, falls and fractures, and dementia);
- The topic has different implications in women than men and lacks a sex-specific approach (e.g. occupational health, cardiovascular diseases).

This selection should be seen as a starting point to discuss women's health but certainly not as exhaustive in the choice of topics. Many other topics could meet these criteria but were not included. Most notably, violence against women is not included in this report. While being of prime importance for women's health, it represents a complex and wide topic with a broad and varied body of evidence that would necessitate more resources to be comprehensively addressed.
For each topic, the most recent and relevant available evidence from Belgium was reviewed. If various data sources were available each was critically appraised and presented. Alternatively, different sources were presented together and contrasted where relevant. Since for many topics data sources were scarce, literature was searched for studies to estimate or better understand the topic. Efforts were made to put the topic into context by referring to available policies or clinical evidence.

This report does not report specifically on the health of trans people and non-binary persons. Data are lacking and further research is needed to look specifically at these questions.

OVERVIEW OF THE STATE OF HEALTH OF WOMEN IN BELGIUM

Sex and gender differences are present across a wide range of health issues. The healthybelgium.be website, a tool for monitoring population health, offers essential insights into the health status of the population living in Belgium, disaggregated by sex. It provides an in-depth understanding of these topics. The overview presented here provides a summary of key insights into various aspects of women's health extending and synthesizing information available on the website.

1. LIFE EXPECTANCY AND CAUSES OF DEATHS

Women live longer than men in most countries in the world[27]. Life expectancy, while being a good indicator of population health, fails to account for the health state in which those years are spent. To account for this, another measure, health expectancy, measures life expectancy in good health[28]. Another concept, premature mortality, which looks at deaths that occur before 75 years old can also be used as a metric for assessing the effectiveness of treatment and prevention policies.

Women live longer than men but the additional years are not always spent in good health

In 2022, life expectancy in Belgium was 81.7 years and was higher among women (83.8 years) than among men (79.5 years). Between 2000 and 2022, life expectancy increased more rapidly in men than in women (5.0 years in men and 2.9 years in women), reducing the gender gap. Life expectancy in women was higher in the Flemish region (+2.2 years compared to the Walloon region and +0.6 years compared to the Brussels Capital region) and higher in the most advantaged socio-economic group (+6.0 years compared to the most disadvantaged group)[29]. Despite a higher life expectancy, women's healthy life expectancy aligns with that of men: in 2018, disability-free life expectancy at age 65 in Belgium was 12.4 years for women and 12.5 years for men[30].

Cancers and cardiovascular diseases are the main cause of death in women in Belgium

Cardiovascular diseases and cancers have been the leading causes of death of women in Belgium for the last decades except for 2020 when COVID-19 became the leading cause of death (for both sexes). Alzheimer's disease and other dementias remains one of the top five leading causes of death for women of all ages in Belgium and is more than double the mortality rate of men (107.3 per 100,000 vs 52.2 per 100,000).

Premature mortality is often used as a key health indicator for health system performance, disease prevention, and priority setting. In this report, it is defined as

deaths occurring under 75 years old. COVID-19 and lung cancer were the leading causes of premature mortality for men and women in 2020. These were followed by breast cancer and chronic obstructive pulmonary disease (COPD) in women and ischemic heart disease in men. Most causes of premature death in women have decreased over time except for lung cancer and COPD. While lung cancer mortality has been decreasing by more than 40% in the last ten years in men, we observe an increase followed by a stagnation in women.

A new surveillance system for maternal mortality was launched in 2021 in Belgium

Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. Maternal deaths in Belgium are counted based on information available on death certificates. However, details are often lacking on the exact circumstances of death, making it difficult to examine patterns in maternal mortality. To bridge this gap, the Belgian Analysis system for Maternal Mortality (BAMM) (started in 2021) uses a national multidisciplinary expert team and a structured protocol to register, analyse, and classify cases of maternal death in Belgium[31].

In 2020, 9 maternal deaths were registered in Belgium, which corresponds to a maternal mortality ratio of 7.1 maternal deaths per 100,000 live births for 2016 to 2020[32]. Due to a change in definition, the maternal mortality ratio has increased in the last few years in Belgium.

2. NONCOMMUNICABLE DISEASES

Noncommunicable diseases (NCDs) are the leading causes of mortality and reduced health-related quality of life in Belgium. They are one of the main reasons people use healthcare services and most of them are preventable. In Belgium, more than one in four people report living with at least one NCD and the prevalence increases sharply with age[33]. NCDs are generally higher in women than in men in Belgium and among individuals with a lower educational attainment.

The prevalence of diabetes is higher among men

In 2021, 6.8% of the population in Belgium was diagnosed with diabetes according to the IMA-AIM Atlas[34]. The prevalence of diabetes increases with age and is higher among men. At its peak, it reaches 16% in women over 65 and 22% in men of the same age. However, more than one in three people with diabetes are not aware of their diabetes, which sets the estimated true prevalence of diabetes at 10%[35]. Diabetes prevalence is increasing over time as a result of the ageing population and an increase in the risk factors for diabetes including overweight, low physical activity, and dietary factors.

Cancer incidence is increasing in women in Belgium

A total of 68,782 new cancer diagnoses were recorded in 2020 (31,942 cases in women and 36,840 in men)[36]. The most frequently diagnosed cancers in women in

Belgium were breast, colorectal, and lung cancer (compared to prostate, lung, and colorectal cancer in men). Since 2006, the number of new cancer diagnoses has increased in both women and men, driven in part by the ageing of the population. After adjusting for age, the incidence of new cancer cases has only increased in women. Since 2006, the age-adjusted incidence of lung cancer has increased by 13% in women and decreased by 8.4% in men. Over the same period, the age-adjusted incidence of melanoma has increased by 88% in women and 130% in men.

Women in Belgium are more affected by musculoskeletal disorders than men

In 2018 in Belgium, 12% of the adult population reported suffering from low back pain (13% among women and 11% among men), 7.8% reported suffering from neck pain (10% in women and 5.3% in men), and 15% reported suffering from osteoarthritis (22% in women and 15% in men)[37]. For all the most prevalent musculoskeletal disorders, women are more affected than men.

Premature mortality is the main contributor to the overall disease burden of women in Belgium

The burden of disease can be expressed as disability adjusted life years or DALYs. The DALY is a population-level measure of disease and reflects the sum of years of life lost due to premature mortality (YLL) and years of life lost due to disability (YLD) for a specific disease or condition. In 2020, 80% of the disease burden of women living in Belgium was due to NCDs. The top causes contributing to the disease burden were COVID-19, depression, low back pain, breast cancer, and chronic obstructive pulmonary disorder. The main causes of YLL were COVID-19, lung cancer, and dementia, while the main causes for YLD were depression, low back pain and neck pain. Cardiovascular diseases have the fifth highest burden of disease in women, mainly driven by premature mortality. They represent 9.2% of all DALYs of women in Belgium[38].

3. HEALTH DETERMINANTS

Health determinants refer to all the factors that influence the health of individuals and communities. Health is the result of the interaction of multiple factors including the non-modifiable (genetics and biology) and the modifiable (behavioural and social)[39]. In this section, we examine the influence of modifiable health determinants and how they shape the health of women in Belgium. Many of the results presented here were obtained from the Belgian Health Interview Survey, a nationally representative survey on the self-reported health of the Belgian population, whose last available year of data was 2018.

Women in Belgium use tobacco and alcohol less than men

In 2018, adult women in Belgium (15+ years) reported less daily smoking (12% compared to 18%, respectively) and daily alcohol consumption (6% compared to 13%, respectively) than men. Moreover, women reported less problematic alcohol use, a concept that has been linked to alcohol dependence, than men (4.7%

compared to 9.5%, respectively). For both smoking and alcohol, the prevalence of daily use in women increases with age and hits a peak for women 55-64 years.

Overweight and obesity is higher in Belgian men than in women

Almost half of the Belgian adult population reported being overweight in 2018 and 16% could be considered has having obesity[40]. More men (55%) than women (43%) were overweight. The prevalence of self-reported overweight increases with age and peaks in the 65-74 age group for both women (56%) and men (68%). The prevalence of overweight and obesity is consistently higher in Wallonia than in other regions.

Women in Belgium are less physically active than men

In 2018, less than a third (30%) of the adult population met the WHO recommendation of at least 150 minutes a week of moderate physical activity[41]. Only 25% of women meet the recommended physical activity levels compared to 36% of men. These differences begin to emerge in adolescence where one in five boys (20%) and one in eight girls (13%) aged 11 to 18 meet the WHO recommendations for daily moderate physical activity.

Women report healthier dietary habits than men

More women than men reported consuming at least five portions of fruit and vegetables per day (16% compared to 10%, respectively) although rates for both sexes are very low. Fewer women (16%) drank sugary drinks daily than men (25%)[42].

Women seek more care from healthcare professionals than men

Women in Belgium visit general practitioners (GPs) and specialists more often than men. This phenomenon is most pronounced in the 25-34 age group, which may be linked to pregnancy-related consultations20. In 2018, women reported more often having contact with a dentist in the past year than men[43]. Women also reported consulting a physiotherapist more often than men (25% compared to 18%, respectively), and more women consulted a dietician than men (5.6% compared to 3.7%, respectively). More women consulted a psychologist, psychotherapist or psychiatrist than men (10% compared to 7.9%, respectively)[44].

THE HEALTH OF ADOLESCENT GIRLS

The health behaviours established in youth can often lay the foundation for a healthy life into adulthood. Numerous European and North American studies have documented an increase in self-reported psychological[45–47] and physical[48,49] symptoms for girls in the transition to adolescence, often at a higher rate than for boys. The transition to adolescence is linked to a decline in health-related quality of life (HRQOL)[45], with a widening gender gap for physical and psychological aspects of HRQOL from the age of 13 onward. Various factors contribute to these disparities between girls and boys, including menstrual disorders, significant hormonal fluctuations, internal coping patterns, and low self-esteem, which are more prevalent among girls[45].

In Belgium, great strides have been made in recent decades towards providing more equal opportunities for men and women. Nevertheless, a gap in opportunities still exists, fuelled by stereotypes, prejudice and discrimination. For example, girls are still under-represented in scientific, technical and mathematical fields[50]. They may also face higher academic expectations and restrictive gender-based societal norms. Identifying, acknowledging, understanding and deconstructing these barriers are essential steps on the road to a world where boys and girls can experience equity.

In this section, we used information from the French and Dutch Communities' HBSC (Health Behaviour in School-aged Children) reports from 2002 to 2018[51,52] and the international HBSC report of 2018[53]. The HBSC is a nationwide survey of school-aged children that focuses on the health of girls and boys from 10 to 18 years including psychological and physical characteristics, behaviours and knowledge, including around sexual health. The HBSC studies include mandatory questions that are included in both surveys for the whole of the country, but each research team may add certain questions to their respective surveys. As such, some indicators are only present for the French Community, and others for the Dutch Community. In addition, some questions, such as those about sexuality, were only asked of adolescents aged 13 or over.

KEY MESSAGES

Girls reported more psychosomatic and depressive symptoms and more suicidal thoughts than boys and these trends tended to increase with age.

Almost half as many girls as boys said they felt "often or always" confident about themselves.

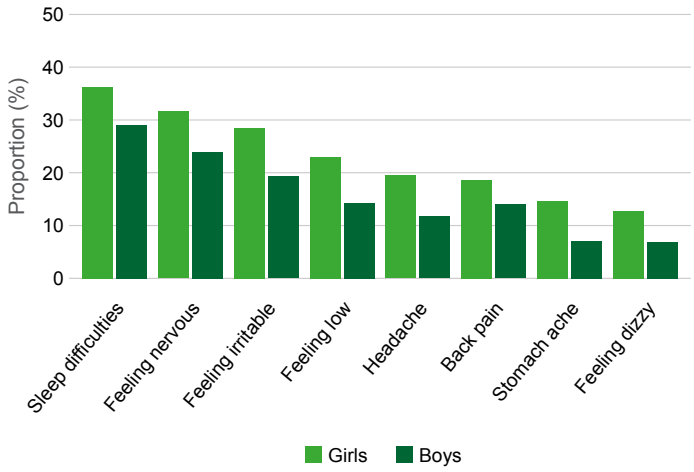
Girls have better results than boys on health behaviours but they are less physically active

Around one in ten teenagers did not use contraception the last time they had sex

1. MENTAL HEALTH

Self-reported psychosomatic symptoms are more frequent in girls than boys

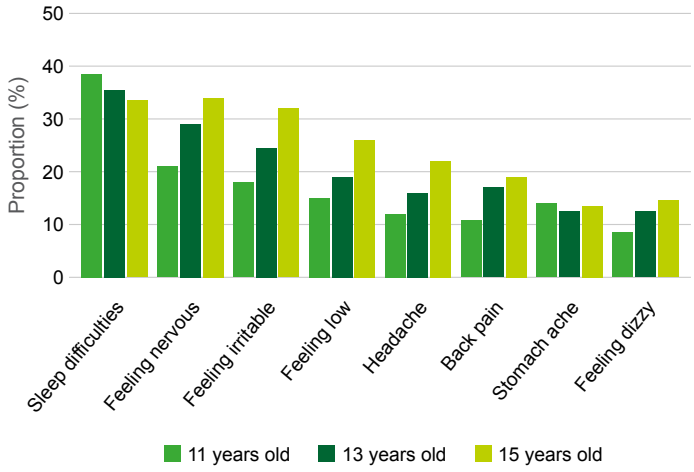
Among adolescents 10 to 18 years, more girls than boys reported experiencing any type of psychosomatic symptom several times a week (Figure 1). The most reported symptoms were sleep difficulties, feeling nervous, and feeling irritable.



Source: Belgian average based on HBSC French Community[51] and HBSC Dutch Community[52]
The presence of psychosomatic symptoms was assessed using the "HBSC-symptom checklist (HBSC-SCL)" tool[54]. This tool comprises a list of eight symptoms, for which students are asked to report the frequency with which they have experienced them over the past six months. Five frequency categories were proposed, ranging from "just about every day" to "rarely or never".

Figure 1 • Proportion of adolescents (10 to 18 years) reporting psychosomatic symptoms more than once a week over the past six months, by symptoms and sex, Belgium, 2018

For girls, most of the symptoms were more present at age 15 than at age 11 (Figure 2). For example, feeling nervous increased from 21% among 11-year-olds to 34% among 15-year-olds, feeling irritable from 18% to 32%, feeling low from 15% to 26%, back pain from 10% to 19%, headaches from 12% to 22% and dizziness from 8.5% to 14%. Stomach pains were relatively equal across ages and only sleep-related difficulties were more prevalent at younger ages.

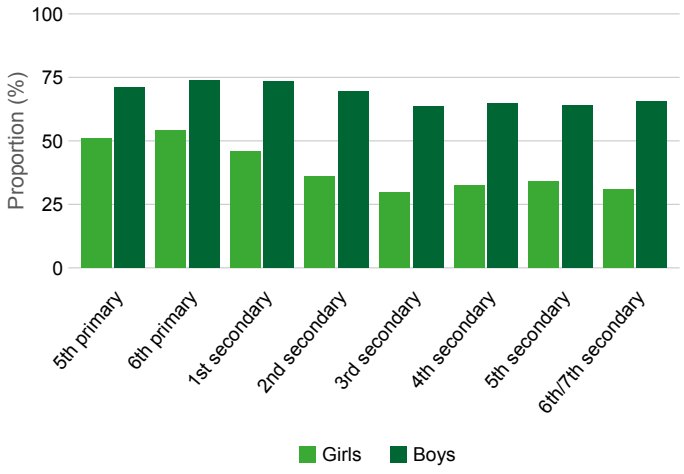


Source: Belgian average based on the 2018 HBSC International Report[53].
Age 11 represents students aged between 10.5 and 11.5, with an average age of 11. The same range is used for 13- and 15-year olds.

Figure 2 • Proportion of girls reporting psychosomatic symptoms more than once a week over the past six months, by symptoms and age group, Belgium, 2018

Girls are less likely than boys to report feeling confident about themselves

In 2018, girls from the French Community were less likely than boys (39% vs. 68%) to report feeling confident often or always. A difference by sex was observed across all grade levels. The gap widens as girls get older with a greater difference for those in the last year of secondary school compared to primary school (Figure 3).

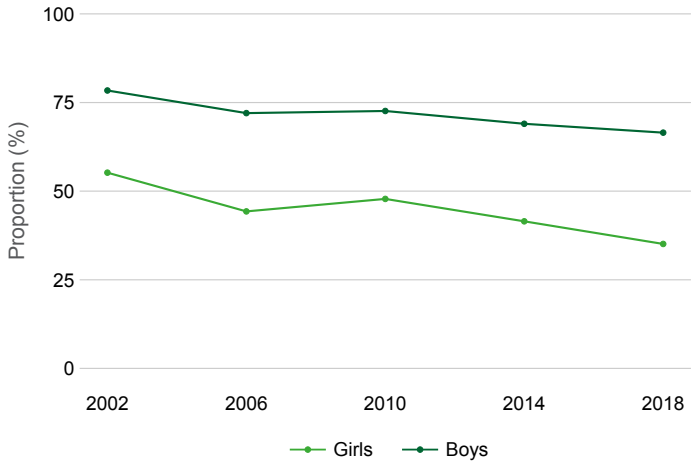


Source: HBSC French Community[51]

Adolescents' feeling of self-confidence was addressed only in the French Community by the question, "Generally, are you confident in yourself?" Five response categories were provided and a binary indicator was created to distinguish between adolescents who indicated that they were 'often' or 'always' confident from those who were not.

Figure 3 • Proportion of adolescents reporting that they were often or always confident, by sex and by grade, French Community, 2018

The proportion of adolescents feeling 'often to always' self-confident has been decreasing over time, with a decrease significantly more pronounced among girls (Figure 4). Not only does the gap between boys and girls widen as children get older, but all girls are reporting less confidence than a decade before.

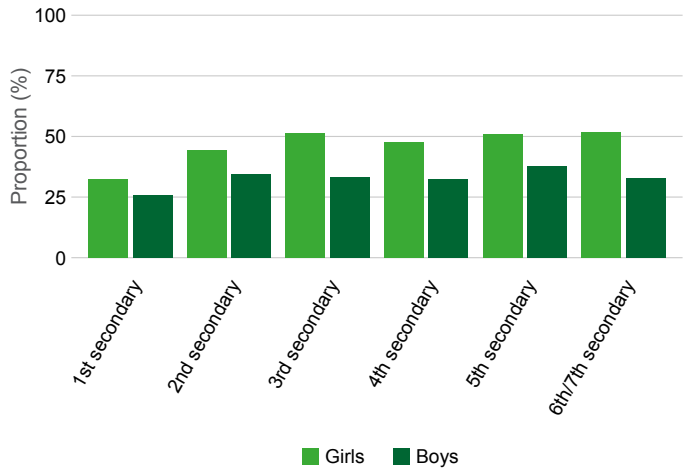


Source: HBSC French Community[51]

Figure 4 • Proportion of adolescents reporting that they were often or always confident, by sex and by year, French Community, 2002 to 2018

Girls are more likely to report depressive symptoms than boys

In 2018, more girls (47%) than boys (31%) from the French Community reported depressive symptoms (Figure 5). Among both girls and boys, the proportion of adolescents with depressive symptoms was higher from the third year of secondary school with the gap persisting through to the last year of secondary school.



Source: HBSC French Community[51]

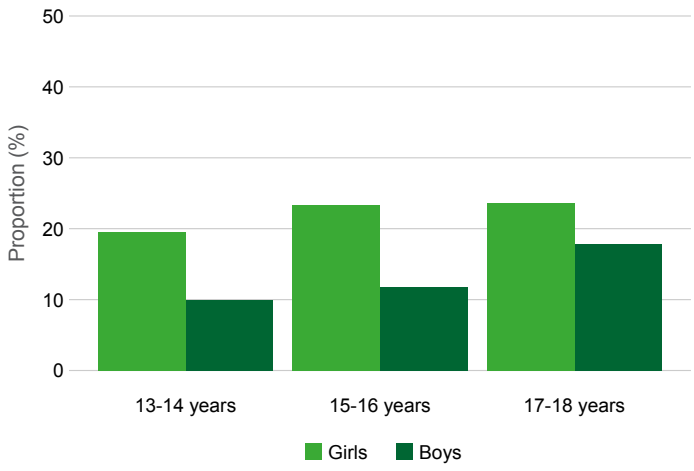
The presence of depressive symptoms was measured only in secondary school adolescents in the French Community, using the 10-item version of the Center for Epidemiologic Studies Depression Scale (CES-D-10)16. If the score was equal to or greater than 10 (out of a total of 30), it was assumed that the student might be subject to depressive symptomatology. However, it should be kept in mind that this threshold of 10 probably overestimates the proportion of adolescents with depressive symptoms and does not constitute a clinical diagnosis of depression.

Figure 5 • Proportion of adolescents with depressive symptoms, by sex and by grade, French Community, 2018

More girls than boys report suicidal thoughts, and the proportion increases with age

In 2018, the prevalence of suicidal thoughts was 22% among girls and 13% among boys from the Dutch Community (Figure 6). More girls than boys had reported thinking about suicide more than once. The prevalence was higher among older adolescents for both sexes. No significant difference in the proportion of suicidal thoughts was observed among girls compared with the previous 2014 study, while it had decreased in boys.

The prevalence of suicidal thoughts differed significantly by education type only in girls. The prevalence in girls was significantly higher in vocational secondary education (35%) and technical secondary education (27%) compared to general secondary education (16%).



Source: HBSC Dutch Community[52]

To gain insight into the prevalence of suicidal thoughts and self-harming behaviour among secondary school adolescents, the following questions were asked: 'Have you ever thought about ending your life?' and 'Have you ever intentionally taken too many pills or otherwise tried to physically harm yourself?' The analyses distinguished between adolescents who had thought about suicide or harmed themselves at least several times (response categories 'yes, several times' to 'very often') and adolescents who had never or once done so (response categories 'never' to 'yes, once')[52].

Figure 6 • Proportion of adolescents having had suicidal thoughts more than once, by age and by sex, Dutch Community, 2018

Differences in mental health between girls and boys can be influenced by changes in hormonal cycles, feelings of security in reporting problems, and the higher societal expectations they may experience

The mental health of Belgian adolescent girls is generally poorer than that of boys. Several factors are likely to play a part in these gender differences including biological factors, such as the onset of puberty, and the menstrual cycle, which may account for a range of physical and mental complaints. Norms and attitudes dictated by peers, family and society can also contribute to a major mental burden and be a source of gender inequality which further reinforces poor mental health in girls.

1.1. Policy implications

Steps need to be taken to improve self-esteem and reduce the stress associated with schoolwork in adolescent girls

Although Belgium has a relatively extensive mental health care network for children, there are too few programmes or policies aimed at specifically improving the health of girls. Studies on the subject have only begun to emerge and health-related differences between girls and boys are therefore only poorly considered.

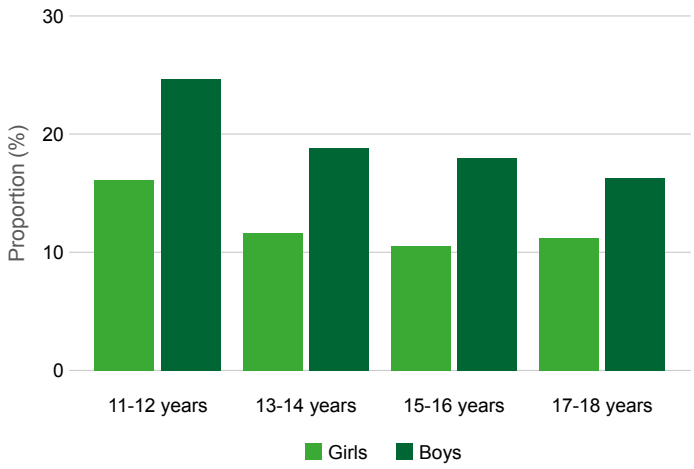
The results from the 2018 HBSC study "showed the need to take measures to increase self-esteem and reduce schoolwork-related stress in adolescent girls, in order to help reduce health disparities between girls and boys. Society, through the influence of the media among others, also has a role to play in reducing these disparities. Its influence adds to that of peers and family in shaping gender-specific norms and attitudes, which govern what is perceived as "acceptable" behaviour on the part of girls and boys - how they should act, think, or feel, for example. Finally, school staff, parents and health promotion professionals are important stakeholders to include to avoid a school climate characterised by competition and social comparison, and thus help adolescent girls set realistic goals to reduce the stress of schoolwork and improve their confidence in their abilities and skills"[51].

Recommendations have been issued to improve gender equality among school staff through training. Training materials are also available online in the French and Dutch Communities.

2. HEALTH DETERMINANTS

Girls in Belgium are less physically active than boys

In 2018, fewer girls (13%) than boys (20%) aged between 11 and 18 reported engaging in at least 60 minutes of moderate- to vigorous-intensity physical activity per day (Figure 7). Younger adolescents (aged 11-12 years old) were more likely to be sufficiently physically active than older adolescents for both sexes.



Source: Belgian average based on HBSC French Community[51] and HBSC Dutch Community[52]
To identify sufficiently active adolescents, a question on the frequency of sport participation (assimilated to sustained intensity physical activity) was considered in conjunction with the following question: "During the last 7 days, i.e. during one week, how many days were you physically active for a total of at least 60 minutes (one hour) per day?".

Figure 7 • Proportion of adolescents 10 to 18 years old who perform at least 60 minutes of moderate- to vigorous-intensity physical activity per day, by age and sex, Belgium, 2018

There are also socioeconomic inequalities in the risk behaviours reported in the HBSC. For example, students who came from more affluent families reported more time spent in physical activity than from less affluent families. In the Dutch Community, almost twice as many girls and boys from the highest socioeconomic level reported reaching recommended physical activity compared to those in the lowest socioeconomic level (girls: 19% compared to 11%; boys: 32% compared to 16%)[53]. In the French Community, this same inequality by socioeconomic status was only evident in girls with 18% of girls in the highest socioeconomic level achieving recommended levels compared to 11% in the lowest socioeconomic level[53].
A survey by Kind & Samenleving (2019) clearly shows that far fewer girls (37%) report playing outside than boys (63%)[55]. Adolescent girls cite a feeling of insecurity as one reason discouraging physical activity. According to Plan International, nine

out of ten girls in Antwerp, Brussels and Charleroi have already experienced sexual harassment in the street. Another barrier mentioned is the "masculine" conception of public spaces where the majority of the children using spaces for public sports are boys (85%) creating an environment that is predominantly male and competitive to the exclusion of girls[56].

Girls score higher than boys on many health behaviour indicators

Girls are less likely to engage in risky behaviours including smoking, cannabis use, alcohol use, or physical violence (2018 HBSC). Girls also score higher than boys on several preventive health behaviour indicators such as regularly brushing teeth[1], fewer injuries requiring medical attention[1], consuming fruits and vegetables daily, less weekly consumption of fast food[1], less time spent watching TV or video games, longer hours of sleep, and greater support from friends.

2.1. Policy implications

Girls need to be more engaged in physical activity and sport

Girls in Belgium are less physically active and more sedentary than boys, setting them at greater risk for a number of NCDs later in life. To counter this, Gezondleven[57,58] proposes various policies to be implemented in collaboration with the teaching team, parents and pupils to improve pupils' physical condition and reduce sedentary time in school settings.

On a broader scale, the Flemish government has launched the "activatie van meisjes en vrouwen" project, which aims to increase the active presence of girls and women both in active sport and in its context (as trainers, coaches, officials, administrators, etc.)[59]. In 2023 and 2024, 11 sports federations will receive a grant to develop the presence of girls in sports activities such as rugby, surfing and skateboarding. A similar project to promote sport among girls and women also exists in the French Community through the "Plus Sportives" campaign[60]. Girls in the French Community cited a lack of free time, premenstrual syndrome/menstruation, fatigue and lack of motivation as obstacles to engaging in sports. More than half of them said that these obstacles could be overcome if they had the opportunity to do more sports at school[61].

The project "Girls make the city" proposes to make urban spaces more inclusive

To address the differences between girls and boys in public spaces, ZIJkant and Wetopia aim to develop gender-sensitive interventions and encourage cities to engage in gender-sensitive urban planning[56]. For this purpose, the "Girls Make the City" project in Brussels calls on experts (the girls) to give their opinions and improve the status of girls in public spaces. At the final workshop, the girls meet with the architects and divide themselves into 3 action groups consisting of 1) physical interventions, 2) reclaiming space through programming and activities, and 3) awareness-raising and collaboration56. Together, they formulate nine proposals for making public spaces more inclusive – find more about it here: Girls make the city brochure.

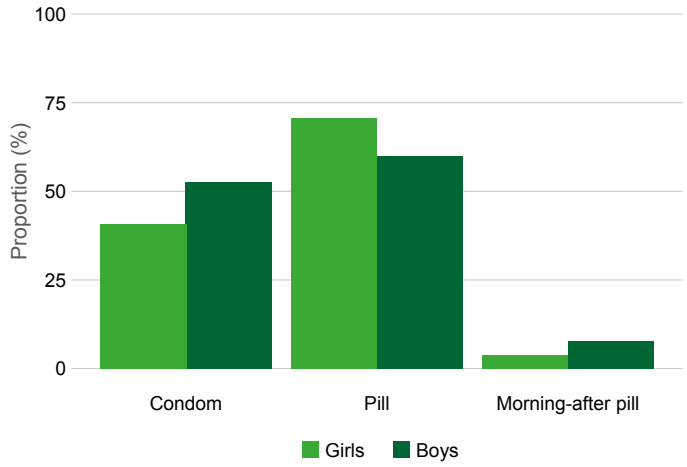
[1] Only available for the French Community.

3. EMOTIONAL, RELATIONAL AND SEXUAL HEALTH

Girls more often report using the pill while boys report using condoms during the last intercourse

In 2018, 8% of sexually active girls and 11% of sexually active boys in Belgium did not use contraception the last time they had sex.

The contraceptive method most commonly reported by adolescents 13 to 18 years during the last intercourse was the contraceptive pill (71% for girls and 60% for boys) followed by condoms (41% of girls and 52% of boys) (Figure 8). More girls reported using the pill while more boys reported using condoms. In both French and Dutch Communities, adolescents aged 13 to 14 were the most likely to use the morning-after pill. Older adolescents tend to use condoms less often than the youngest as a method of contraception, choosing rather the contraceptive pill. It is important to note that the pill does not protect against sexually transmitted infections (STIs).



Source: Belgian average based on HBSC French Community[51] and HBSC Dutch Community[52]

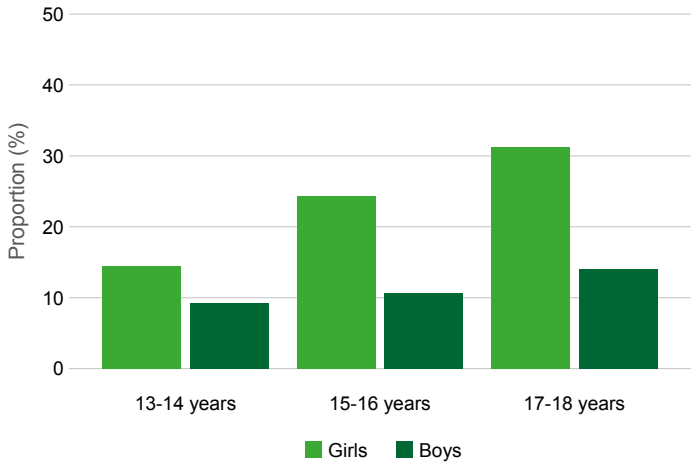
Figure 8 • Proportion of adolescents aged 13 to 20 using contraceptives during their last sexual intercourse by contraceptive type and sex, Belgium, 2018

Less than half of the adolescents receive information on emotional and sexual life in the French Community

In 2018 in the French Community, nearly 48% of secondary school adolescents said they had received information on emotional and sexual life since the start of the school year (through school courses, family planning, medical check-ups and other circumstances). Girls in the French Community were more likely than boys to have reported receiving information. In addition, adolescents in vocational training were often less informed and more at risk of not using contraception.

Nearly one-third of girls aged 17 to 18 years have been victims of unwanted sexual touching

In 2018 in the Dutch Community, 23% of girls and 11% of boys aged 13 to 18 have experienced unwanted sexual touching. This proportion was higher among older adolescents, ranging from 14% at age 13 to 14 to 31% at age 17 to 18 for girls and for boys from 9.3% at age 13 to 14 to 14% at age 17 to 18 (Figure 9). The proportion of teenagers who have experienced unwanted sexual touching has increased between 2014 and 2018 for both sexes.



Source: HBSC Dutch Community[52]
Secondary school adolescents have been asked if they have ever been touched in an unwanted sexual way via the question "Has anyone ever caressed or touched you in a sexual way when you did not want to?". The response options consisted of: 'I do not wish to answer', 'never', 'once', 'a few times' and 'often'.

Figure 9 • Proportion of adolescents who have experienced unwanted sexual touching, by age and sex, Dutch Community, 2018

3.1. Policy implications

Belgium needs more comprehensive and inclusive sex education classes at school
According to an extensive survey conducted by Mutualités Libres among 1,000 young people aged 16 to 25, only 26% of those questioned realise the importance of having safe sex to avoid sexually transmitted infections (STIs)62. These results coincide with those of the HBSC studies, which demonstrate that young people who have sex do not always protect themselves, and are not sufficiently informed about emotional and sexual life.
Sensoa, the Flemish centre of expertise on sexual health, reports: "Young people tell us that sex education classes at school are often too focused on biological aspects and that certain topics are unfortunately not covered: how to flirt, what it's like to have your first time, how to "sext" safely, and so on. Yet most teachers are convinced of the importance of organising courses on relationships and sexuality, especially since the #metoo movement. What we also hear from high school adolescents is that sex education classes are very heteronormative. They're mainly about heterosexuals and not inclusive enough of LGBTQIA+[62]."

Sexual education classes are not required in all Belgian schools

The Walloon Region, the Wallonia-Brussels Federation and the COCOF decided to set up a Cooperation Agreement, which came into force at the start of the 2023 school year. The agreement stipulates that schools will be obliged to organise at least one 2-hour EVRAS activity in 6th primary and 4th secondary, (i.e. 4 hours over the entire schooling period)[63].
In Flanders, sex education classes in schools are no longer compulsory[64]. It is therefore possible that teachers who are uncomfortable with questions of sexuality may abandon them altogether, leaving some pupils without any information on the subject.

There are useful websites that young people can visit to make an appointment at a family planning centre or find useful information on contraception, pregnancy, sexuality and STIs such as Love Attitude: Centres de planning familial agréés en Wallonie et à Bruxelles, and mescontraceptifs.be in French and zanzu.be and allesoverseks.be in Dutch.

HEALTH IN ADULTHOOD

The habits and behaviours that shape childhood often carry over into adulthood, and risks and disparities can accumulate and widen as women age. That is why it is important to offer and maintain ways to optimize women's and girls' health and well-being. Women are confronted with specific health needs when entering adulthood, some of which are specifically linked to reproductive development, and some of which affect their health as a whole. The hormones associated with reproductive age for women, which spans from 15 years until menopause (around the age of 50), play an important role in health. Beyond that, good mental health is important for wellbeing and mental disorders are more common in women and affect them differently than men. In addition, the start of a working life, balanced with social expectations around motherhood, symptoms associated with reproductive health, and gender-based social inequalities can impact health. Women are more likely to have higher levels of work stress, as well as a worse quality of work-life balance compared to men, associated with lack of personal time[65].

1. SEXUAL AND REPRODUCTIVE HEALTH

Reproductive health represents the state of physical, mental and social well-being in all matters relating to the reproductive system; its functions and processes. When there is a healthy equilibrium, people can have a satisfying and safe sex life, and they can reproduce and have the freedom to decide if, when and how often to do so[66]. This aspect of health is particularly relevant for women, considering that their bodies are those that can be childbearing.

KEY MESSAGES

Better reimbursement could increase access to contraception

Fertility rates are decreasing in Belgium and age at childbirth is increasing

Pregnancies resulting from IVF treatments in Flanders and in Brussels are steadily increasing

One in ten women in Belgium have endometriosis or polycystic ovary syndrome in Belgium and many will experience a delay in diagnosis

Voluntary termination of pregnancy remains highest among the youngest women, but is increasing for older women

1.1. CONTRACEPTION

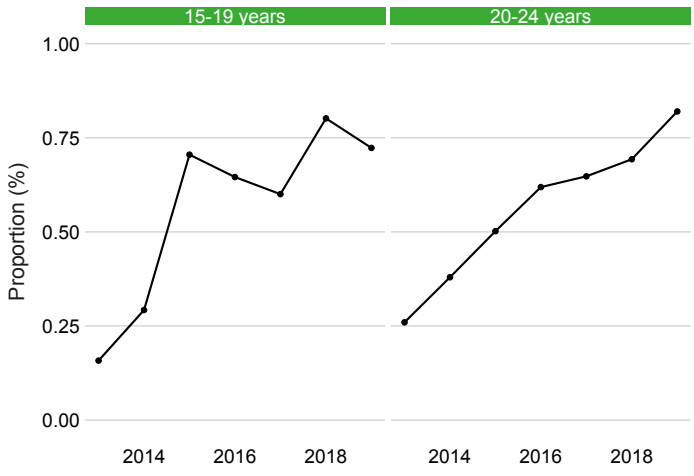
Belgium provides good access to contraceptive use

Access to contraception is a cornerstone of family planning and should be enshrined in public health policy. To hold governments accountable, a European Contraception Policy Atlas was created by the European Parliamentary Forum for Sexual and Reproductive Rights, which investigates how European public authorities perform with regard to access to contraception, counselling, and online information[67]. The latest version of the Atlas (2023) shows an uneven picture of contraceptive access, use, and information across Europe. The United Kingdom, France, and Belgium performed the best in terms of contraception compared to Poland, Bosnia-Herzegovina, and Hungary which ranked the lowest. Belgium was found to have good coverage of contraceptives and exceptional access to counselling and availability of online information including through government-supported websites (zanzu.be, allesoverseks.be, mescontraceptifs.be)[67].

But more reimbursement could increase their access

In Belgium, the contraceptive pill, the intrauterine device (IUD) and the male condom are the most commonly used contraceptive methods. Over time, the use of pills has been decreasing while the use of IUDs has been increasing[68]. In Belgium, there is a subsidy on the price of certain contraceptive pills but this is not true for IUDs. Since 2013, people under 25 years and people who benefit from a higher reimbursement of healthcare (because of socioeconomic position or other factors) receive an additional discount on their contraceptives making it entirely free of charge. Data on their reimbursement showed that there might be a link between use and reimbursement. In 2020, the number of women receiving a reimbursement for contraceptives was 1.8 times higher than four years before[69]. The reimbursement data also show an increasing trend in the use of IUDs (a 3-fold increase from 2013 to 2019) with a slight shift towards younger women using IUDs (Figure 10). This follows the introduction of IUDs targeted towards younger women. It is worth mentioning that in Belgium the taxation on IUDs is different depending on the type of device. A value-added tax of 6% is applied to IUDs except for the copper IUD which is higher at 21%[70].

Concerning the male condoms, reimbursement is available depending on the health insurance and can be between 30€ to 50€ per year. This reimbursement is not automatic and people must submit a claim to receive it. People can also get male condoms for free at family planning centers[71]. The morning-after pill, also knowns as emergency contraception, is available at pharmacies free of charge for everyone, regardless of their age, and does not require a medical prescription.



Source: Own calculations based on data from the Intermutualistic agency - IMA[72]

Figure 10 • Proportion of women with a new intra-uterine device (IUD) implant eligible for reimbursement (<25 years old) every year, Belgium, 2013-2019

1.1.1. Policy Implications

Belgium can further improve access to contraception

According to the European Contraception Policy Atlas, Belgium ranks highly concerning access for women[73]. The Atlas issued recommendations for Belgium to make further improvements, including[73]:

- Belgium should aim at ensuring that reimbursement includes all women of reproductive age to reduce social inequalities in access to contraception (not just women under 25 years);
- Belgium should improve the availability of highly trained specialists as well as the availability of contraception supplies in rural areas;
- Belgium's contraceptive prevalence rate (59%) is lower than countries such as France (65%), Bulgaria (65%) or Finland (79%). Efforts should be made to ensure access to information for vulnerable groups.

Sexual education should be extended to adulthood

Extending sex education from adolescence to adulthood can be a powerful tool to provide information that will continue to improve personal well-being by reinforcing a positive attitude towards sexuality and tolerance of sexual diversity[74]. In Belgium, several opportunities for sexual education outside the compulsory school system exist. These are mostly associations funded by regional entities which have the aim to improve access to sexual education to the general population (e.g. O'Yes, Sensoa), or specific target groups (e.g. I.Care, Ex Aequo).

More support is needed for male contraception

The latest survey carried out by Solidaris in 2017, shows that the majority of the contraceptive burden still falls on women (68% of women use contraception compared to just 33% of men)[75]. Male contraception, while less developed than female contraception, offers effective alternatives like vasectomy, which involves the surgical cutting of the vas deferens to prevent the ejaculation of sperm. While 39% of men say they are ready to use testicular contraception, 31% are opposed to the so-called male contraception. Among women, 51% would be prepared to leave the mental burden of contraception to men, 21% are opposed and 25% don't know whether they would accept their partner managing their couple's contraception.

1.2. FERTILITY

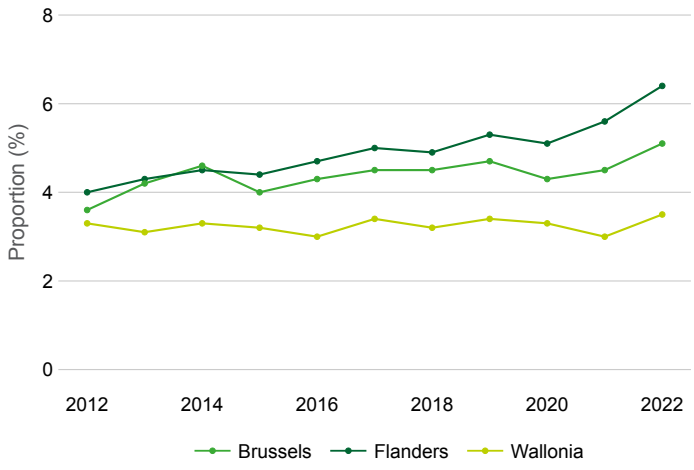
Fertility rates in Belgium are decreasing and age at childbirth is increasing

The fertility rate refers to the average number of children born to women during their reproductive years. The decrease in this rate is affected both by infertility but also by women who choose not to have children. This decision may be driven by social, economic and cultural factors not related to the health status. The decline in reproductive health is a natural aspect of the ageing process. Pregnancy at an advanced maternal age may incur an increased risk of adverse maternal perinatal outcomes such as haemorrhage and hypertension, and adverse infant outcomes including preterm birth, low birth weight, and neonatal mortality[76]. On the other hand, infertility rates include all the persons who are not able to conceive via natural conception due to disorders or genetic, functional or immunological abnormalities of the reproductive organs as well as chronic illness and sexual conditions[77]. Infertility is described by the WHO as a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse[78]. Female physiological factors, alone or combined with male physiological factors, contribute to approximately 70% of reported infertility cases[79]. More information on perinatal health and maternal health can be found in section 2.

Similar to other high-income countries, fertility rates in Belgium have been decreasing over the years while women are having their children later in life. According to Eurostat, the fertility rate for Belgium in 2022 was 1.53, meaning that on average 1.5 children are born to a woman during her lifetime, and the mean age at childbirth was 31 years old. It is a decrease from 2013 when the fertility rate in Belgium was 1.76 and the mean age at childbirth was 30 years old[80]. This may be a result of a combination of factors including fertility postponement, changes in family formation (e.g. families wishing to have a stable income and be settled before having children), and increased access to education and contraception for women (which reduces unwanted pregnancies). Compared to other countries, Belgium has a relatively short maternity leave, a lower remuneration of parental leave, and a short paternity leave which may contribute to gender inequalities and impact the decision to have children[81].

Pregnancies resulting from IVF treatment are increasing in Flanders and Brussels

The first baby in Belgium resulting from an in vitro fertilization was born in 1983[84]. Since then, the use of such techniques has become more and more common. Figure 11 shows the evolution of the share of pregnancies resulting from an IVF/ICSI treatment between 2012 and 2022 by region of Belgium. There has been an increase in IVF-assisted pregnancies in Flanders and Brussels, with a more stable trend in Wallonia. Although recently a better success rate of ART over time has been reported for Belgium[85], IVF-assisted pregnancies can carry health risks compared to spontaneous pregnancies for both mothers and children, including infection or bleeding[86]. There is also evidence of increasing dropout rates in IVF/ICSI treatment cycles over time[85]. The overall mental and physical impact of fertility treatments is understudied in Belgium. However, a recent survey investigated reasons for discontinuation of frozen embryo transfer cycles and found that the main reasons for stopping the treatment were the psychological and physical burden, the effect on work, the older age of the mother and the effects on the relationship[87].



Source: Adapted from the regional reports of perinatal health 2022 (Santé périnatale en Wallonie, Santé périnatale en Région bruxelloise, Perinatale gezondheid in Vlaanderen[88–90])

Figure 11 • Proportion of pregnancies resulting from IVF/ICSI procedure by region and year, Belgium, 2012-2022

Information concerning fertility treatments such as fertility, infertility, diagnosis, therapies and emotional support can be found in French on jeveux1bebe.be or in Dutch on deverdwaaldeooievaar.be.

1.2.1. Policy implications

Not enough is known about infertility in Belgium

A recent WHO report estimates that, globally, approximately one in six people have experienced infertility at some stage in their lives. The Belgian Register for Assisted Procreation (BELRAP) records all assisted reproductive technology (ART) procedures, including the retrieval of eggs or using frozen-thawed embryos[82]. It contains pseudonymized information about ART treatments sent on a per-cycle basis by the participating treatment centres[83]. Technical annual reports are compiled presenting information about specific aspects of IVF and non-IVF treatment and outcomes such as administrative data, indication for treatment, cycle-specific data, data on transfer, medical complications, early pregnancy, and evolution of pregnancy. However, the existing BELRAP register, although informative, only offers a limited understanding of infertility in Belgium. Because of inequities in access to fertility care, the existing data sources may not reflect the experiences of people who for various reasons do not have the same access to infertility treatment. Currently, important data gaps exist regarding the profile of the patient group, the overall public health cost, and potential mental and physical health consequences originating due to the treatment.

Belgium could better understand the magnitude of infertility by setting up (a) initiatives to stimulate data collection on vulnerable patient groups and facilitate the sharing of existing data and (b) initiatives to investigate barriers to access to fertility care. The available knowledge and new insights should be incorporated in appropriate interventions for monitoring access to quality fertility care, and for mitigating risk factors for and consequences of infertility.

Fertility epidemiology is lacking in Belgium

Infertility treatments are not under any specific regulation in Belgium. Addressing infertility is crucial for individual health and public health, as it is a fundamental part of sexual and reproductive health and rights[78]. Fertility treatments can be burdensome obstacle courses[87,91]. Several women also testify to having faced other problems in their journey, such as discrimination about their weight or sexual orientation, a significant lack of information, taboo, financial difficulties and a lack of understanding from employers[91]. A recent Belgian survey among patients who stopped their fertility treatment shows that patients would like more psychological support before (41%), during (51%) and after (51%) treatment, as well as lifestyle counselling (44%) and receiving digital information (43%)[87].

1.3. SEXUALLY TRANSMITTED INFECTIONS

There is an increase in the number of reported cases of STIs

The number of reported cases of chlamydia, gonorrhoea and syphilis has been steadily increasing in Belgium[92]. The number of tests for these sexually transmitted infections (STIs) is also rising progressively and proportionately. Chlamydia is the most frequently reported and most widespread STI in Belgium. Chlamydia infections in women occur mainly between the ages of 15 and 30 and, if undiagnosed, can lead to a decrease in fertility. Chlamydia infections often cause little to no acute symptoms so there is a greater chance of delayed or misdiagnosis compared to other STIs. Gonorrhoea and syphilis are less common and mainly diagnosed in men[92].

HIV infections are decreasing

In 2022, 597 new diagnoses of HIV infections were made in Belgium, 68% were in men. HIV diagnoses have been decreasing in Belgium for the past decades. However, an increase was observed among heterosexual women from sub-Saharan Africa and among men who have sex with men aged 20 to 29 years old. Despite the higher number of cases found in men, the screening rate of women is higher than in men (69 tests per 1000 women compared to 50 per 1000 men), only partly due to prenatal screening[92].

Vaccination can protect against certain HPV infections

HPV infections are sexually transmitted infections caused by the Human Papillomavirus (HPV). Most people will be concerned with an HPV infection in their life but most infections will remain asymptomatic and disappear spontaneously. However, if the infection persists it can cause certain cancers like cervical cancer. A vaccine and a screening test exist to protect against certain types of HPV.

1.3.1. Policy Implications

The Belgian Health Care Knowledge Centre (KCE) has developed an online tool for healthcare providers to help implement national guidelines on the identification and treatment of STIs. It also connects providers with useful tools and support systems available to people with STIs, including HIV. The tool is available in French and Dutch and is freely downloadable[93].

Belgium has a federal HIV Plan 2020-2026 to monitor HIV transmissions and patterns, coordinate implementation of plan recommendations, and close gaps in HIV prevention, treatment, and surveillance[94].

In addition, preventing HPV has implications not only for acute infection but also because HPV is the primary cause of certain types of cancers. HPV vaccination is discussed in more detail in the section on Cancer prevention.

1.4. ENDOMETRIOSIS

Endometriosis can have a big impact on a woman's quality of life but often goes undiagnosed

Endometriosis is a chronic condition characterised by the growth of uterine-like tissues outside the uterine cavity. This abnormal growth leads to inflammation primarily in the pelvic region, and in rare cases, outside of the region itself and can lead to infertility[95,96]. Women may also experience symptoms like severe pain during menstruation, sexual intercourse, bowel movements, and/or urination, but also chronic pelvic pain, bloating, nausea, and fatigue. Endometriosis has also been associated with higher rates of mental illness like depression and anxiety[96]. Some women can also experience no symptoms, making diagnosis difficult[97]. The experience of pain can also result in physical limitations, such as the inability to walk due to leg pain or sciatic pain[98]. It mostly affects women of reproductive age. Menopause can alleviate symptoms due to hormonal changes, but it is important to stress that menopause does not always entirely resolve the condition[99] and endometriosis can persist even after menopause[100].

There is still no consensus on the specific causes of the disease. Endometriosis is believed to be caused by different factors. These include retrograde menstruation that results in menstrual blood and cells present outside of the uterus, and the transformation of cellular tissue from one organ into uterine cells and others[95,101]. A combination of genetic and environmental components can also increase the risk of causing the disease[95,96].

No information exists about the prevalence of endometriosis in Belgium

The global prevalence of endometriosis is thought to range from 2-10%[99] and affects one out of ten women of reproductive age (and in rare cases men[102])[96]. No estimates exist for the prevalence of endometriosis in Belgium[95].

The similarity of symptoms to other conditions, and the taboo and stigma around symptoms of menstruation mean that women often experience a delay in the diagnosis of endometriosis that can range from 2 to 10 years[103]. In Belgium, estimates of a diagnosis delay range from 4 to 7 years[104].

There is currently no known cure for endometriosis and it is not currently preventable[96]. The diagnosis is based on a clinical display of the symptoms mentioned above. Those can be managed via pharmacotherapy (e.g. painkillers, non-steroidal anti-inflammatory drugs[101] and hormone therapy). In some cases, surgery is required to remove the lesions, adhesions, and scar tissue caused by endometriosis[95].

Women with endometriosis are more likely to suffer mental conditions

Women with endometriosis often experience chronic or debilitating pain which puts them at risk for mental symptoms. They can also experience a minimisation or normalisation of their pain in healthcare settings, contributing to a lack of continuity of care which can also create a mental strain. This experience can be debilitating to the point of loss of productivity and absenteeism at work[105]. Like other NCDs, untreated and unmanaged endometriosis can contribute to a wider economic and societal burden.

A small study conducted in 2008 in Belgium found that for women treated for endometriosis, the annual costs associated with the disease were almost 10,000 EUR, around 75% of which was from lost productivity. In addition, the annual societal cost for Belgium was also estimated, revealing a substantial figure of 1.7 billion euros106. Earlier diagnosis and targeted endometriosis treatments could potentially reduce costs for patients and society[104].

1.4.1. Policy implications

More efforts must be made in identifying, characterising, and relieving the burden of endometriosis in Belgium

The Belgian Institute for the Equality of Women and Men has released a report that includes several recommendations aimed at addressing endometriosis at a national level, with a focus, on research, practical implementation and prevention. The report emphasises the following items:

- There is a need for comprehensive research to evaluate existing endometriosis healthcare facilities. Additionally, there is a need for a RIZIV-INAMI convention to standardise reimbursements, ensuring equal access to treatments[104,108].
- Recognising endometriosis as a chronic condition in national healthcare is vital for appropriate resource allocation. Specialised centres, currently numbering five in Belgium, offer tailored care, and would improve patient outcomes significantly[104].
- Efforts to increase awareness in medical schools and among occupational medicine practitioners are critical[109].

In Belgium, the Belgian Health Care Knowledge Centre (KCE) will introduce a report on the organisation of care for the disease in 2024. KCE is undertaking a comprehensive study on endometriosis, involving a systematic review of literature, a narrative review of healthcare organisations in different countries, a survey of Belgian hospitals, and an analysis of hospital admission data. The study aims to provide insights for policymakers to improve care for women with endometriosis[110].

Experience can be learned from neighbouring countries on actions to manage endometriosis

For example, France has implemented since 2022 a national strategy to detect sooner, and better support women experiencing endometriosis but also provide better information for the general public, women, and healthcare professionals[103,111]. In addition, to this national plan, France has put in place epidemiological surveillance of diseases linked to endocrine disruptors such as endometriosis[112]. A national registry was also implemented to capture and gather data on the disease to facilitate research[113]. Finally, a cohort study was created to use patients' experiences to improve care[114].

Guidelines on managing and diagnosing the disease were also published in the UK by the NICE[115] and the European Society of Human Reproduction and Embryology in 2022[116].

1.5. POLYCYSTIC OVARY SYNDROME (PCOS)

Around half of women with PCOS are not aware of their condition

Polycystic ovary syndrome (PCOS) is an endocrine disorder in women of reproductive age[117,118]. It is the main cause of infertility[119] and is estimated to affect one woman in ten of reproductive age[120] worldwide (in Belgium this would be an equivalent of around 300,000 women)[120–122]. Around half of women with PCOS are not aware of their condition either because symptoms are not clear or they are not present leading to a delay in diagnosis[123]. There is currently no information about the prevalence of PCOS in Belgium.

This lifelong condition can lead to multiple comorbidities and account for multiple symptoms[118]. Women can experience ovulation irregularities, increased androgen levels that lead to acne, growth of facial hair, loss of hair, and cysts on their ovaries among other symptoms[117–119]. While the disease accounts for multiple physical symptoms, it can also have an impact on mental health. Women with PCOS are more likely to experience depression, anxiety, painful sex and infertility, and emotional distress[124]. Women with PCOS are also at a higher risk for multiple conditions including obesity, high cholesterol, impaired glucose tolerance, and long-term complications such as diabetes, endometrial cancer, and cardiovascular disease[117,118].

Definitions for PCOS remain unclear, affecting diagnosis and epidemiology

PCOS's aetiology is not well understood and is likely caused by different factors such as genetic, endocrine, and environmental components[117]. The disease has known some definition changes over the last two decades which has led to challenges in developing an epidemiological picture of the disease across countries[125].

PCOS can contribute to a lower quality of life in affected women

PCOS is a lifelong condition and with underdiagnosis, may lead to debilitating symptoms if not managed[126]. Treatment relies on the management of symptoms often controlled by engaging in physical activity, eating a healthy diet, metformin for high blood glucose, and psychological support[120]. Women with PCOS may also need surgery if behavioural management is not enough[124]. Most of the disease symptoms can be managed over time and can lead to a positive evolution of the disease[120].

1.5.1. Policy implications

Belgium lacks epidemiological data for a comprehensive understanding of diseases such as endometriosis and PCOS

There is currently no information regarding the prevalence and impact of endometriosis and PCOS in Belgium. These are essential for providing adequate screening and services to the women affected[104]. The upcoming Belgian Health Interview Survey of 2023 will incorporate questions related to endometriosis, contributing to a better understanding of the current population status but regular monitoring should be incorporated to understand care management, the cost of illness, and the wider societal impacts.

1.6. VOLUNTARY TERMINATION OF PREGNANCY OR ABORTION

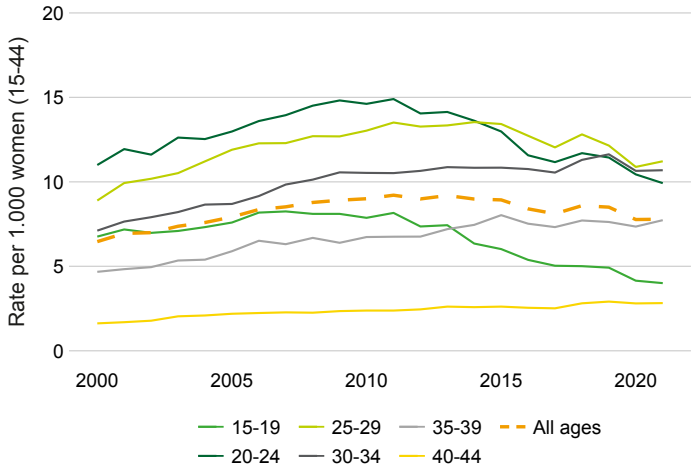
Voluntary termination of pregnancy, or abortion, is a fundamental right and was decriminalized in 1990 in Belgium. It is a medical act reimbursed by health insurance. While the right to termination of pregnancy remains enshrined in Belgian law, criminal sanctions exist, both for women and for doctors who do not respect the conditions imposed by the law[127].

- The termination must take place within 12 weeks of conception (14 weeks amenorrhea). Termination after 12 weeks is possible if the continuation of the pregnancy would seriously endanger the health of the woman or if it is certain that the child to be born will be affected by a serious condition recognised as incurable at the time of diagnosis;
- The termination must be carried out under good medical conditions by a doctor;
- The doctor informs the woman of the risks and other options and ascertains the woman's determination;
- A six-day reflection period must be observed between the first consultation and the day of the termination[127].

Termination of pregnancy in Belgium is performed in the majority of cases in a specialized centre (84% of terminations) or a hospital. Women over the limit of 12 weeks post-conception are often redirected by the Belgian centres to centres abroad where the limit is longer like in the Netherlands and in the United Kingdom. The number of Belgian residents known to have had an abortion in the Netherlands has been decreasing since 2004, and it was 371 women in 2021[128].
Information on the termination of pregnancy in Belgium is collected, analysed and reported by the national evaluation commission of the law of 15 October 2018. The commission reports every two years to the Belgian Parliament and includes information on abortion and recommendations. Most recently, the commission recommended better prevention and information, better accessibility to contraception and voluntary termination of pregnancy, and the suppression of the six-day reflection period. An underreporting of termination of pregnancy for medical reasons is likely[128].

Voluntary termination of pregnancy remains highest among the youngest women but is increasing for older women

The abortion rate among women of reproductive age (15-44 years) has been decreasing since 2013 (Figure 12). The greatest decrease is in younger women 15 to 29 years, while the rate has slightly increased for women over 35. Greater reimbursement of contraceptives for young women may be, in part, contributing to the decrease although a definitive causal link cannot be established.



Source: Commission nationale relative à l'interruption de grossesse, 2023[128]

Figure 12 • Trends in the abortion rate, by age group, Belgium, 2000-2021

Most women choose to have an abortion for non-medical reasons

At the moment of the clinical visit, the doctor can include up to 3 reasons for the pregnancy termination on the declaration. The main reasons given in 2020 and 2021 were personal (51-83%) including unwanted pregnancy (18-20%), feeling the family is complete (14%), women do not want children (13%), and women feel too young (7%). The second stated reasons depended on the age of the women. Among younger women (10-24 years old), financial and material reasons were the most important (13-25%), while among older women over 25, the family and relationship reasons were more common (12-23%). More women over 30 years reported health reasons compared to younger women (7-9%).

More than half of the women who have an abortion have used contraception

Contraception is not 100% effective at preventing pregnancy. Among women undergoing voluntary termination of pregnancy in 2020 and 2021, 56% had used one or more methods of contraception; 31% of women reported having used contraception irregularly or incorrectly, 18% of women said to have use contraception correctly and 6% did not know. Among the women using contraception, 37-39% used the contraceptive pill, 27% used a condom, 10% used periodical abstinence and 6-7% used interrupted coitus or the morning-after pill.

More information about termination of pregnancy in Wallonia and Brussels : http://www.gacehpa.be/
More information about termination of pregnancy in Flanders : https://abortus.be/

1.6.1. Policy implications

A national commission regularly evaluates the status of abortion in Belgium and recommends improved access to care

The commission for the national evaluation of the law of 15 October 2018 on the termination of pregnancy meets regularly and is charged with providing recommendations following the evolution of abortion use in Belgium[128]. In addition to this commission, the federal government mandated an independent multidisciplinary inter-university committee in charge of studying and evaluating the practice and legislation on voluntary termination of pregnancy in Belgium which has issued its own set of recommendations[129]. In general, both commissions recommend the expansion of access to contraception, better information on alternatives for contraception and family planning, as well as better care for women seeking termination of pregnancy.

2. MATERNAL AND PERINATAL HEALTH

Maternal health refers to the health of women during pregnancy, childbirth and the post-partum period, whereas perinatal health refers to health from 22 completed weeks of gestation until 7 completed days after birth[130]. The WHO states that women who remain healthy during pregnancy and after birth are more likely to stay healthy later in life[131]. It is, therefore, important to ensure access to a quality environment and care to have the best possible health for a woman and her child.

KEY MESSAGES

Lower education, unemployment, single motherhood and lack of healthcare coverage have all been associated with adverse birth outcomes

There are inequalities in perinatal mortality by migration status in Belgium

Episiotomies are decreasing in Belgium but remain high in Flanders

The prevalence and outcomes of post-partum depression have been poorly studied in Belgium

2.1. PERINATAL MORTALITY AND INEQUALITIES

Maternal and child mortality in Belgium is low

In Belgium, the rate of death of new-born babies is low compared to other countries. However, increasing maternal age at birth in Belgium and inequalities could increase the rate of high-risk pregnancies so caution for the future remains necessary[132]. A number of NCDs, including obesity, and risk factors such as smoking are linked with poorer maternal and child outcomes. Obesity in particular is rising among women

in Belgium and should be considered as a risk factor for perinatal health. Protecting mothers and new-borns therefore requires a holistic approach to population health, aimed at an overall, trans-generational improvement of public health.

Perinatal mortality in Belgium is primarily attributed to congenital abnormalities and complications arising from preterm births

The mortality rate during the neonatal period (i.e. until 28 days after birth) is a key indicator in maternal and child health and reflects the responsiveness of the healthcare system to antenatal and perinatal care[132]. In Belgium, as with most high-income countries, the main causes of neonatal death are congenital abnormalities and complications related to the most extreme preterm births. The risk of neonatal death is also higher in the case of multiple pregnancies. In Belgium, the neonatal mortality rate was 3.2 per 1,000 live births in 2020[133].

There are severe inequalities in perinatal mortality by migration status in Belgium

Inequalities in pregnancy outcomes between mothers of different nationalities and socio-economic status have already been highlighted in Belgium[134–139]. For example, it has been shown that women of Moroccan, sub-Saharan African and Turkish nationality suffer 80% higher perinatal mortality than women of Belgium nationality[135]. Cultural and linguistic barriers, as well as discriminatory practices, can be a major obstacle to access to healthcare services for women of immigrant background[140–142]. Lower education, unemployment, single motherhood and lack of healthcare coverage have all been associated with adverse birth outcomes such as preterm birth and low birth weight[143].

By 2023, one in every five people in Belgium had origins in another country with wide variations by region (11% of the Flemish and Walloon populations, 37% of the Brussels-Capital population)[144]. The proportion of births to mothers with a non-Belgian nationality has been increasing over the last decades[145–147]: out of all births in 2021, 71% were in non-Belgian women in the Brussels-Capital region145, 26% in the Walloon region[146] and 30% in the Flemish region[147]. Up to 25% of babies are born in Brussels to families with incomes below the poverty line, and this proportion is even higher among mothers coming from outside the European Union[134].

2.1.1. Policy implications

Perinatal care should be adapted to each woman and each pregnancy

Women should have a right to a safe pregnancy and delivery that includes their own wishes and perspectives in care. Greater efforts should be made in Belgium to help the most vulnerable populations, such as families of low socio-economic status and women of non-Belgian origin, who may be at greater risk of poor birth outcomes.

The Federal Centre of Expertise in Health Care (KCE) is proposing to structure pregnancy monitoring through a "prenatal care pathway" centred around each pregnant woman and tailored to her specific needs. During care, "personalized prenatal advice consultations would support informed decision-making for parents about their pregnancy, childbirth and the first few weeks of their child's life"[148].

Several reports are available for healthcare professionals to guide them in applying the existing recommendations relative to low-risk birth, clinical assessment and

screening tests, prevention of preterm birth in women at risk and caring after uncomplicated delivery[149–154].

Perinatal health and outcomes are regularly monitored in Belgium

In Belgium, there are two centres for perinatal epidemiology: the Studiecentrum voor Perinatale Epidemiologie (SPE) for the Flemish region and the Centre d'Epidémiologie Périnatale (CEpiP) for the Walloon and Brussels-Capital regions. Together these centres analyse perinatal data from birth and death declarations and publish status reports on perinatal health in Belgium.

2.2. BIRTH-RELATED INTERVENTIONS

The caesarean section rate in Belgium was around 20% in 2021

Childbirths by caesarean section have been increasing throughout the world for the past thirty years[132]. Not all caesarean sections are medically indicated and this worldwide increase has been attributed to various reasons, such as the reduction in surgical risk, the fear of professional responsibility issues in the event of a vaginal delivery with complications, or the possibility for physicians and patients to organise their schedules. Caesarean sections can be life-saving in situations such as prolonged or obstructed labour, foetal distress, or because the baby presents in an abnormal position[155]. However, the procedure itself is not without risk and should, according to the WHO, only be performed when medically necessary[156]. Out of the total number of births, the proportion of C-sections in Belgium in 2021 was 21% in the Brussels Region[145], and 23% in the Walloon Region[146] and the Flemish Region[157]. These figures are below the European average (EU-13 countries) of 26%[132].

Pregnancy-related intervention rates (C-sections, induction rate, and episiotomy rates) in Belgium vary greatly depending on the place of delivery and even the mother's nationality. Some maternity hospitals have very high rates of intervention compared to others[145,146,157]. The caesarean section rate, for example, varies from 15% to 28% in the Brussels Region[145], from 14% to 35% in the Walloon Region[146] and from 16% to 32% in the Flemish Region[157].

Episiotomies are decreasing in Belgium but remain high in Flanders

An episiotomy is an incision performed in the vulva during delivery to widen the passageway for the baby and to prevent tearing of the perineum[132]. This was common practice – nearly systematic – in the 20th century, but its excessive use is considered today as a symbol of the needless medicalisation of childbirth. Its systematic use was called into question by many women wishing to have a more 'natural' childbirth[132]. For vaginal delivery in 2021, the episiotomy rate was the highest in the Flemish region (35%)[157], followed by the Walloon region (20%)[146], and the Brussels-Capital region (15%)[145]. This represents a sharp drop compared to 2010 when the overall prevalence of episiotomy in Belgium was 48%[132].

2.2.1. Policy implications

The Centre for Perinatal Epidemiology has published two reports on the state of perinatal health in Brussels and Wallonia with a set of conclusions and

recommendations for each region. Both regions are experiencing decreasing numbers of births, a high burden of obesity for pregnant mothers, and a rising number of inductions and caesarians[89,90]. The equivalent Studiecentrum voor Perinatale Epidemiologie found that for Flanders, the chance of admission to neonatology was almost three times as high for caesarian births as for spontaneous delivery, emphasizing the importance of using caesarian section only when indicated[88].

2.3. POST-PARTUM DEPRESSION

The prevalence and outcomes of post-partum depression have been poorly studied in Belgium

Post-partum depression, also known as postnatal depression can occur at any time in the year following the baby's birth. Post-partum depression is the most common complication of childbearing and can have an onset even before delivery[158]. Women with post-partum major depressive episodes often have severe anxiety and even panic attacks leading to a serious impact on women's health[159].

Only a few studies on post-partum depression have been conducted in Belgium. A small study of 130 women who agreed to complete a survey 3 months after having given birth found that one in ten presented with some symptoms associated with post-partum depression[160]. The study found that women who encountered negative emotions during pregnancy or received solely material support from their partners were notably more susceptible to developing post-partum depression within three months after childbirth. A second small study of 2019 with a cohort in Belgium (n=71) showed that 24% of women had experienced at least one episode of depression during the first year after the last childbirth[161]. Comprehensive data on the prevalence of post-partum depression in Belgium is not currently available.

Several risk factors are associated with post-partum depression including a past diagnosis of depression, depressive symptoms during pregnancy[162,163], having gestational diabetes mellitus[164], smoking[163,165], having postpartum weight retention[166] and financial problems[167].

A small study in Leuven of women being followed up after a diagnosis of post-partum depression found that 39% continued to experience symptoms of depression more than 3 years after having given birth[167]. Another European study that included Belgium as a study site found that children born to mothers who had experienced post-partum depression exhibited a number of behavioural problems[168].

Fathers and adoptive parents can also be affected by post-partum depression

It is important to note that fathers are also susceptible to postpartum depression. A meta-analysis including 47 studies found that the prevalence of prenatal depression and post-partum depression in fathers was 9.8% and 8.7% respectively[169].

Parents who adopt a child can also develop depression after the child's arrival. Although they do not experience the same physical changes that a birthmother does, the emotional and mental stress that comes with the arrival of a new child can have a serious impact on mental health[170].

2.3.1. Policy implications

The paternal leave reform of 2002 showed a positive effect on women's health regarding mental and behavioural disorders, musculoskeletal disorders, and other diseases

A positive effect of the introduction of a two-week paternal leave for fathers in Belgium on the number of sickness days was found among women[171]. A decrease in the number of sickness days among women is shown for mental and behavioural disorders, musculoskeletal system or connective tissue diseases, and other diseases[171]. However, since this reform, the implementation of longer paternal leave reforms has occurred. To our knowledge, there are no further studies investigating a potential association with women's health in the context of these new reforms.

More information and normalisation is needed to address post-partum depression

Post- partum depression is a long-lasting issue that has been largely undealt with and unspoken about. After giving birth, women feel left alone while experiencing physical and emotional changes without knowing what will come next. Fortunately, this subject is increasingly discussed and taken into account during post-birth medical check-ups[172]. "La Ligue des familles" seeks to support women with more normalisation and information about post-partum in our societies and has proposed a list of suggestions to help women in need[173] :

- Information to women and their partners about postpartum and its issues, its challenges.
- To implement a comprehensive and coherent policy, over a longer or shorter period, for women who have just given birth, depending on their needs.
- Develop front-line support via home help trained in postpartum care.
- Make birth leave equivalent for both parents.
- Extend maternity leave to 21 weeks, and allow mothers to gradually return to work between the 16th and 21st week.
- Networking between parents through pre- and post-natal meeting places.
- Prevention programs that systematically identify post-partum depression.
- Access to quality care for all women, regardless of their status.

For more information, the "Naître et grandir" website (in French) offers a fact sheet on PPD, including definitions, symptoms and risk factors, and PPD in fathers and adoptive parents. They also discuss treatments and preventive measures. Similar information can be found in Dutch on the website of Kind en Gezin.

3. MENTAL HEALTH

Mental health is determined by emotional, psychological and social well-being. It enables us to cope with the stresses of life, contribute to the community and make healthy decisions. The WHO considers mental health to be a basic human right, crucial to personal, community and socioeconomic development[174]. The concept of mental health goes beyond the absence of mental illness. Mental health experiences can differ from person to person and lead to different social and health outcomes[174]. In many circumstances, there is a gender difference in mental health and well-being that can be influenced by access to care, and several other social factors, requiring a gender-based approach.

KEY MESSAGES

Women present more often anxiety or depressive disorders compared to men	There are important gender differences in mental health care	Suicide mortality rate in Belgium is lower for women than for men, but among the highest in Europe

3.1. ANXIETY AND DEPRESSION

Women in Belgium have a higher reported prevalence of anxiety and depression than men

In 2018, 11% of the adult population (15 years and older) reported having an anxiety disorder and 9.4% reported having a depressive disorder. For both conditions, women reported a higher prevalence than men (anxiety: 14% compared to 8%; depression 11% compared to 8%)[175]. Many factors may be contributing to these differences, some of which are gender-specific and some of which are linked to other social determinants of health[176].

The higher prevalence of anxiety and depression in women can be explained by various factors, including gender-specific risk and protective factors, help-seeking behaviour, coping mechanisms, social roles, perceived responsibilities, and the attention received from healthcare services[177]. Additionally, hormonal fluctuations inherent in various biological processes, societal expectations, diverse gender roles, and cultural factors contribute to unique stressors experienced by women. Balancing multiple roles and facing societal pressures are among the stressors that contribute to anxiety and depression[177–179]. In general, anxiety was more frequently reported by women than men across every age group and especially in young people[177]. For more information on mental health see healthybelgium.be.

There are important gender differences in mental health care

Overall, women are more likely than men to use health services for mental health problems[180]. Although the mechanisms behind this finding are not fully understood, several factors can play a role, including gender-specific psychological profiles (e.g., different diagnoses, severity of the condition, treatment options), the socio-cultural

context of gender roles also influences help-seeking behaviour where women may feel more willing to access health services.
Only a few data sources on mental health care use in Belgium include information about sex. The Belgian Health Interview Survey provides information about the use of mental health medications[175]. In 2018, more women than men (aged 15+) reported taking sedatives (15% in women compared to 9.5% in men) and antidepressants (9.8% in women compared to 5.3% in men). The consumption of sedatives increased with age, particularly after 45 years old in women and after 65 years in men. The consumption of antidepressants is particularly high in women after 45 years of age. Since 1997, the consumption of antidepressants has doubled in both genders. The higher antidepressant consumption in women from age 40+ can be attributed in part to the treatment of menopausal symptoms. More information on menopause can be found in the related section.

Women report a greater need for psychological support

A recent publication combined results from self-reported mental health survey data from Sciensano as well as information on mental health care use from a health insurance fund[181]. Mainly, women reported a greater need for psychological support than men (27% compared to 17%, respectively). Among people who reported a need for psychological support, the proportion of unmet mental health needs (self-reported) was higher among men than among women (44% compared to. 40%, respectively). Although the proportion of unmet mental health needs was lower among women, they reported higher unmet needs for psychological support compared to men (11% compared to 7%, respectively). Men who reported unmet mental healthcare needs most often cited "not daring" to seek care as the main reason (34% compared to 29% in women) whereas women were more likely to report a financial barrier (23% compared to 19% in men). No significant gender differences were observed for other reasons (e.g. no time to seek support or no support nearby). Women also reported using outpatient mental health care at a higher rate than men, and this increased over time, particularly in younger age groups: in 2010, 13% of users of outpatient mental health care were women under 30 and this percentage reached 21% in 2022.

3.1.1. Policy implications

Better data is needed to improve mental health care services in Belgium

In 2019, the Belgian Health Care Knowledge Centre (KCE) provided an extensive report mapping the current landscape for mental health care services and identifying their shortcomings and possible overlaps[182]. The conclusion was clear: KCE was not able to verify whether these services meet the mental health care needs of the population in Belgium as there are no reliable figures on the subject. We underline the message of the KCE report that policymakers should prioritize the implementation of an efficient encoding system for data relating to mental health problems, the care services needed, the services provided and how these services are used, their costs and their quality. Special attention should be paid to gender differences during the development of these data collection efforts. Mental health is an important public health challenge for both women and men. Understanding gender differences is crucial to preventing and managing mental health problems.

Readers are invited to consult the KCE report for specific recommendations to improve mental health care for both women and men.

3.2. SEVERE MENTAL ILLNESS AND SUICIDE

Regarding more severe mental illness (e.g. psychotic or bipolar disorders), a key objective of the Belgian mental healthcare system is to offer appropriate treatment and support while avoiding unnecessary involuntary psychiatric hospitalisations. Involuntary hospitalisation is generally indicative of a crisis episode and can indicate where prevention or management of severe mental illness may be lacking. In 2021 in Belgium, there were more involuntary psychiatric hospital admissions in men (11.6/10,000) compared to women (7.3/10,000)[183].

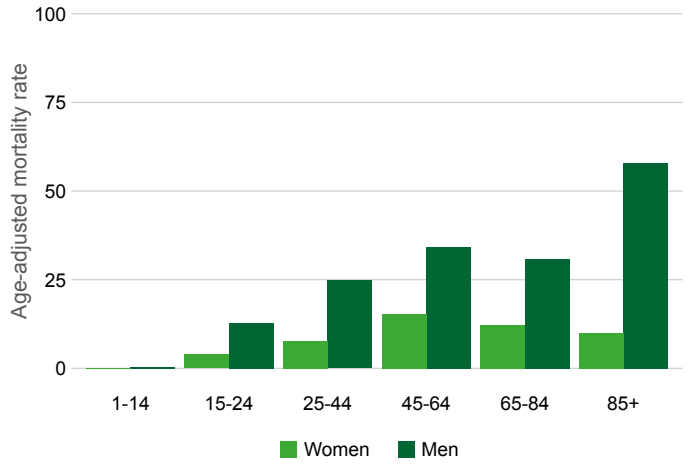
Suicide mortality rate in Belgium is lower for women than for men but still among the highest in Europe

Suicidal thoughts and behaviours show important gender differences[184]. The 2018 Belgian Health Interview Survey reported that 14% of the population aged 15 years and over had seriously considered suicide at least once in their life. More women than men reported suicidal thoughts (16% compared to 12%) and suicide attempts (5.4% compared to 3.1%). Suicidal thoughts and attempts spiked during the COVID-19 crisis. According to the COVID-19 Health Surveys, 10% of individuals in February 2023 reported having seriously considered suicide in the previous 12 months. Among young women (18 to 29 years), this proportion rose to 18% of those surveyed. Approximately 4 in 1000 people in Belgium reported having attempted suicide in the previous 12 months in February 2023. Among young people (18 to 29 years), this proportion rose to 2.0% of those surveyed.

Suicidal thoughts never have just one cause but arise from an interaction of biological, psychological and social influences. Risk factors include previous suicide attempts, experience of loss, low social support, financial uncertainty, violence, and chronic pain and illness. Suicides and suicide attempts have a ripple effect causing an impact on close family and friends, as well as the immediate communities and society[185].

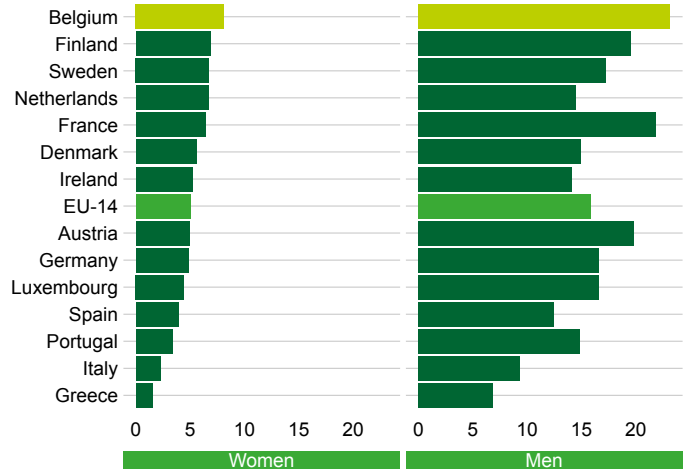
While more women usually consider and attempt to commit suicide, more men succeed: 1,260 deaths by suicide were recorded in men and 475 in women in 2020. The age-adjusted mortality rate due to suicide was 15.2 (per 100,000 people) in 2020 in Belgium. It was 2.8 times higher in men (23 per 100,000) than in women (8.1 per 100,000). Among men, suicide rates are the highest for men aged over 85. Among women, suicide rates are highest for those between 45 and 64 years old (Figure 13)[184].

In 2020, Belgium had the highest suicide rates among the EU-14 countries, both for men and women. The rates were 1.5 times higher for men and 1.6 times higher for women than the average rate of the EU-14 countries (Figure 14). However, international comparisons of suicide mortality rates should be interpreted with caution as differences in socio-cultural context and data quality hamper the comparability between countries. Nevertheless, this warning should not serve to minimize the problematic suicide rates in Belgium[184].



Source: Own calculations based on the death certificates database, Statbel[186]

Figure 13 • Age-adjusted suicide mortality rate (per 100,000) by age and sex, Belgium, average 2018-2020



Source: Eurostat[187]

Figure 14 • Age-adjusted suicide mortality rates among women (right) and men (left) by country, EU-14, 2020

3.2.1. Policy implications

A strengthening of suicide prevention actions is needed

Suicide is a particularly important public health and societal problem in Belgium. Suicide is preventable and much can be done to prevent it at individual, community and national levels. Multiple successful strategies have been identified to decrease the number of fatal and nonfatal suicides[188], including additional training for health care providers, teaching young people coping and problem-solving skills and reducing risk for future harm. Several organisations in Belgium work in the prevention of suicide.

If you are in distress or in need of emotional/psychological support, do not hesitate to call 02 648 40 14 for the community help service helpline.
Pour un soutien en français, la ligne d'appel du centre de prévention du suicide est accessible au 0800 32 123.
Voor hulp in het Nederlands, neem contact met de zelfmoordhulplijn via het gratis telefoonnummer 1813.

4. OCCUPATIONAL HEALTH

KEY MESSAGES

Women experience poorer mental health, more musculoskeletal problems, and more violence in the workplace

Among women, the highest mortality rates are found among drivers, army personnel and small business owners. Overall, men in all occupations have higher mortality compared with women

Women are underrepresented in the Occupational Diseases Fund

Symptoms of menstruation and perimenopause can affect women in the workplace

Women are more affected than men by sexual harassment in the workplace

Life at work represents an important part of women's and men's lives in Belgium, yet inequalities can substantially impact that experience. In this respect, the Gender Equality Index represents an important tool to compare the progress of gender equality in several areas of economic and social life in the EU and its Member States. The index measures the extent to which women and men can benefit from equal access to employment and good working conditions. In 2023, Belgium scored 75.4 out of 100 with 100 representing ideal gender equality in the workplace. This is only slightly higher than the European average of 73.8 and places Belgium in 17th place out of 27 European countries189. Despite gradual improvements in the last

decade, there are persistent gender inequalities in the workplace, in employment participation, in quality of work and career advancement prospects. These inequalities are reflected in occupational health where women in Belgium fare more poorly than men.

Occupational health is defined by the International Labour Organisation (ILO) and the WHO as "a multidisciplinary activity aimed at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations"[190]. The working environment, the employment conditions, exposure to risks at jobs, psychosocial aspects of work and the availability of social support all play a role in occupational health. These are combined with more indirect determinants including social status, health behaviour, education and income which also can shape health in the workplace.

4.1. GENDER DIFFERENCES IN THE WORKFORCE

Despite more women joining the workforce, gender inequalities persist

Since the 1960s, the participation of women in the Belgian workforce has grown considerably but there remain important differences in the types of jobs men and women engage in. A recent report by the High Council for Employment found women dominated certain sectors in Belgium including healthcare (26% of working women compared to 6% of working men) and education (15% of working women compared to 6% of working men)[191]. Male-dominated employment sectors in Belgium were industry (16% of working men compared to 6% of working women) and construction (11% of working men compared to 2% of working women). Even within the same occupation, women and men are likely to take up different tasks[192]. Gender differences are also present in the division of paid and unpaid work. In the 2013 report of the Institute for the equality of women and men of Belgium, women reported doing more of the share of household tasks, including unpaid domestic work, care for children, and grocery shopping; whereas men perform more non-routine chores (e.g. lawn mowing). The World Bank estimates that women spend 1.6 times more on unpaid domestic work than men in Belgium[193]. Recent evidence in Belgium shows that this pattern of inequality in the share of household responsibilities persisted during the lockdown during the first wave of the COVID-19 pandemic[194].

4.2. GENDER DIFFERENCES IN OCCUPATIONAL HEALTH

There are differences in the way that women and men are exposed to risks that can impact health in the workplace. Evidence suggests that men are more exposed to diverse physical hazards (e.g., noise, falls, second-hand smoke, asbestos), except for long-lasting or repeated contact with water (which can lead to skin issues), to which more women seem to be exposed than men[195]. On average, men in Belgium report their jobs to include more lifting heavy loads (31% compared to 26% of women), more contact with chemical materials (21% compared to 16% of women), more road travel (29% compared to 14% of women) and less autonomy to order their work tasks (60% compared to 64% of women). On average, women in Belgium

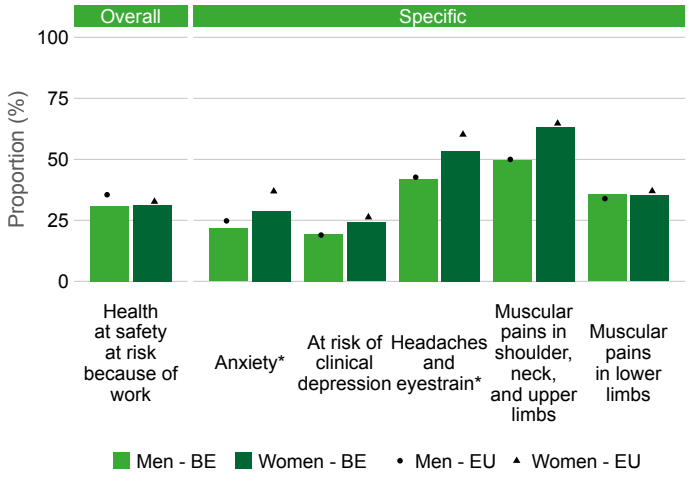
report their work to entail more painful or tiring working positions (40% compared to 35% of men), more lifting of persons (18% compared to 7% of men), and more contact with infectious materials (25% compared to 17% of men) compared to men[196]. These risks are consistent with the dominance of women in the healthcare and caregiving sectors.

Not only are the types of workplace exposures different for men and women, but the physical effects can be different by sex. Physical and chemical exposures can have a different impact on the male and female reproductive systems[197]. For example, common chemicals used in flame retardant textiles and per- and poly-fluoroalkyl substances (PFAS), have been found to impact women's health by altering hormone secretion, menstrual cyclicity, and fertility[198].

There have been efforts put into monitoring occupational health in Belgium[199], but the way these consider gender differences is often fragmented and/or incomplete[200,201]. The following section provides insights from three sources: self-reported health from the 2021 European Working Conditions Telephone Survey; compensation for occupational diseases and injuries from Federaal agentschap voor beroepsrisico's - Agence fédérale des risques professionnels (FEDRIS); and estimates of mortality by occupation building on a linkage between the 1991 Belgian census, the national register and death certificates.

Women experience poorer mental health, more musculoskeletal problems, and violence in the workplace

The results in Belgium from the 2021 European Working Conditions Telephone Survey indicate that approximately 31% of interviewed women and men report that their health or safety is at risk because of their work202. Clear gender differences are observed for mental health problems where 29% of women, 22% of men reported having experienced anxiety in the workplace over the previous 12 months. Compared to men, women in the workplace reported more headaches and eyestrain (53% of women compared to 42% of men), a complaint often associated with long-term computer use. Women also reported more physical musculoskeletal symptoms including pain in the shoulder, neck, and upper limbs during the last 12 months compared to men (63% compared to 50% of men) (Figure 15).



(*) refers to experiences over the last 12 months.
Source: Eurofound (2023), European Working Conditions Telephone Survey 2021 dataset[202]

Figure 15 • Proportion of people in the workplace reporting health problems, by sex, in Belgium compared to the EU average, 2021

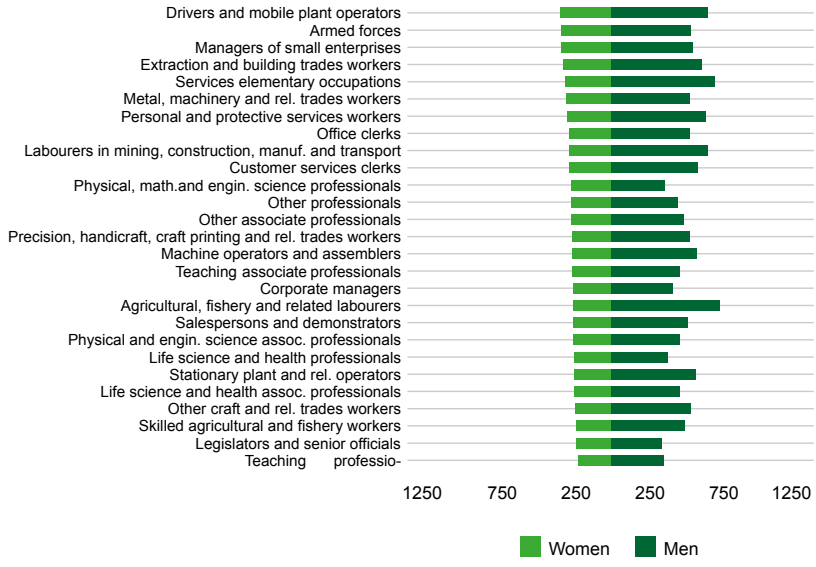
Women are underrepresented in the Occupational Diseases Fund

FEDRIS, the Belgian federal agency for occupational health, provides some breakdowns by sex in their estimates for work-related compensation for occupation injuries and disease but this is not systematic and limits comparisons by gender on all metrics. A report by the European Trade Union investigated women's occupational health in Belgium using the FEDRIS data and found that, in 2010, women accounted for only 26% of first-time compensation claims, most of which were for carpal tunnel syndrome and skin diseases[200]. Mental health disorders are almost completely absent in female claims, whereas musculoskeletal disorders seem to be under-reported. The report found that less than 8% of all compensation for occupational disability in 2009 was allocated to women. Two explanations are provided: women have a lower number of recognised disability cases and women generally receive smaller amounts of economic compensation for their claims because of lower wages.

Manual labour is linked to higher mortality for both women and men

Age-standardised mortality rates (ASMR) are higher in men than in women for all occupational groups (Figure 16)[201]. Men in unskilled labour jobs in agricultural, fishery and related occupations had the highest mortality for the period from 1991 to 2011 with 738 deaths per 100,000. Women who work as drivers or mobile plant operators had the highest mortality with 340 deaths per 100,000. Men in the agricultural, fishery and related labourers occupation died at more than three times the rate as women in the same professions (ASMR 738 compared to 256 for women). Both women and men in manual labour occupations experienced the highest rates

of mortality. Working in managerial, teaching, scientific and health-related positions was associated with the lowest mortality overall.



Source: Adapted from Van den Borre[201]; data sources: 1991 Belgian census and all-cause mortality in 1991-2011 (Statbel)[203]

Figure 16 • Age-standardised mortality per 100,000 from 1991 to 2011 by occupation and sex, Belgium (Reference: 1991 total working population)

Symptoms of menstruation and perimenopause can affect women in the workplace
Menstruation and menopause are essential processes that have a lifelong and regular influence on women's health. Their symptoms (see related sections in this report) can have an impact on women's well-being and by extension their work lives. A Dutch study involving a self-reported survey of 42,000 women found that about 30% reported not being able to engage in their daily activities (including work) because of symptoms of menstruation[204]. About 14% of women sometimes take time off from work due to menstruation complaints. The results of this study need a cautious interpretation considering that women who suffer from menstruation symptoms might be more likely to participate in the study[204]. However, data on work absenteeism also shows that 5-15% of women take time off from work due to menstrual complaints. Researchers calculated that these physical and psychological discomforts can impact productivity at work[205].
In Belgium, nearly nine out of ten working women of perimenopausal age (40 years and over) reported struggling with symptoms including hot flashes, joint stiffness, fatigue, brain fog, or poor sleep. Over half of working women with perimenopausal symptoms experience difficulties during work because of symptoms but almost a quarter of those (23%) felt that menopause could not be openly discussed in the

workplace[206]. There is still a stigma attached to the process of menopause which is reinforced by a lack of knowledge among women, healthcare professionals and employers[207]. Available literature on the relationship between work and menopause is scarce and should be interpreted with caution since associations could also be related to other factors (for example age). Women of perimenopausal age have higher rates of sick leave, at least some of which may be due to perimenopausal symptoms.

4.2.1. Policy implications

The current system for monitoring occupational diseases needs to be evaluated

The current compensation system for occupational diseases and injuries should be assessed to identify potential barriers for victims. The predefined list of occupational diseases is the result of a process of understanding occupational health, a research field historically focusing mainly on male-dominated industries[208]. Persons can also apply for compensation for non-predefined diseases and injuries in the open system. However, there may be a substantive deterrent effect because victims are responsible for providing evidence of the exposure context and the causal connection between exposure and disease or injury. A detailed gender analysis should be provided of the available data on claims and approved compensations. These results should be compared with the existing epidemiological evidence to assess underrepresented population groups and unnoticed occupational diseases and injuries.

Improvements needed in the transfer of data from various sources

The current analysis tools focus mainly on the immediate, direct impact or specific dimensions of occupational health. To keep people actively, happy, and healthy employed, more information is needed on the multidimensional health impact (e.g., precarious employment, exposure to pathogens, non-paid work), the current safety nets for occupational health victims and the further impact on a person's (working) life. This will help policymakers prioritise specific risky occupational settings and/or burdensome occupational health outcomes. Specific policy action plans need to be developed to monitor the medium- and long-term impact of occupational exposures on health, as well as to monitor the medium- and long-term impact of occupational diseases and injuries on employment trajectories.

Further strengthening of current regulations on gender-specific occupational needs

Taboos and lack of awareness reinforce the barriers for women to take a menstrual or menopausal leave. Current policies already allow flexible hours to be taken by any employee although it has not been widely implemented at the employer level. The observation that 15% of the women sometimes take days off due to menstruation complaints, indicates that flexible hours are either not well known by the employees or either not at all implemented. Employees may benefit from extending the opportunities for flexible hours, remote work or leaving work during menstrual- or menopausal-related discomfort. Existing workplace policies at the workplace

should be evaluated for their potential to alleviate menstrual, menopausal or other gender-specific occupational needs and reduce stigma.

4.3. WORKPLACE DISCRIMINATION AND SEXUAL HARASSMENT

In 2021, in Europe, 9.1% of women reported experiencing sexual violence and/or harassment at the workplace as compared with 2.5% of men. Furthermore, more than half of women (52%) reported experiencing at least three episodes of harassment in the workplace[209]. In Belgium, the Institute for the Equality of Women and Men published a report in 2020 that found that women experienced more episodes of sexism and sexual harassment in the workplace including sexist jokes (38% compared to 28% of men), comments on their clothing (49% of women compared to 33% of men), and overt sexual harassment (6% compared to 3% of men). For more information on the analysis and a comprehensive overview of the numbers in Belgium, please refer to "Seksuele intimidatie op het werk. Seksisme in België. Resultaten van de enquête #YouToo?"[210]. Although sexual harassment impacts women and men, women are more affected due to the power imbalances that are rooted within society.

Sexual harassment has detrimental effects on individuals, companies, and societies. Survivors report anxiety, depression, reduced motivation, lower self-esteem, and increased risk of developing gastrointestinal disorders, among other health problems[211]. Additionally, it is reported that survivors of sexual harassment often leave their jobs, have increased absenteeism, and avoidance of work duties[212].

4.3.1. Policy implications

Sexual harassment and violence should be addressed in a collaborative joint action plan

Given that sexual harassment and/or violence does not discriminate on socioeconomic status, region, and occupation; a multidisciplinary and cross-regional action plan needs to be implemented to ensure reaching SDG "Achieve Gender Equality and Empower All Women and Girls". For instance, services on prevention and health at work do not cover the full working population, therefore they are not equipped to provide a full understanding of workers' health. In this platform, issues such as sexual harassment and/or violence can be monitored as well, and reported to governmental instances so nationwide and regional policies can be further evaluated. Policy efforts should made to implement a central data reporting portal where the number of sexual harassment and/or violence complaints can be traced across regions and occupations.

HEALTH IN LATE ADULTHOOD

1. (PERI)MENOPAUSE

Towards the end of women's reproductive age a transition, known as perimenopause, begins to occur in the hormonal balance as women's bodies prepare for an end to fertility and menstruation. This transition is characterised by a reduction in ovulation, a lower production of oestrogen and progesterone, a drop in fertility and shorter, more irregular menstrual cycles and lead eventually to menopause, when menstruation stops altogether[213]. While not all women experience perimenopause symptoms, many do and due to a lack of knowledge and a persistent societal stigma surrounding these symptoms, they may hide, confuse, or underplay their impact[214]. Symptoms can include mood changes, trouble concentrating, depressive symptoms and insomnia as well as physical symptoms like weight gain, slowed metabolism, night sweats, hot flashes and chills. These symptoms often resolve once the process of menopause is complete, but this process can take many years. Beginning around the age of 40, the symptoms of perimenopause can be debilitating and a threat to quality of life, as they often last for more than 7 years or become chronic. Declining oestrogen and progesterone can lead to bone density loss and a rise in cholesterol, putting women at a higher risk for osteoporosis, cardiovascular disease and dementia. In some women, menopause has an earlier onset as a result of certain medical conditions like premature ovarian insufficiency, putting them at a much higher risk for dementia and cancer than other women their age[215].

KEY MESSAGES

Perimenopause and menopause decreases the quality of life for women in Belgium	**Symptoms management can improve quality of life**	**An overarching collaboration of different sectors and the wider society can help lifting taboos around menopause and ensure access to care and treatment**

Perimenopause and menopause decrease the quality of life for women in Belgium

At least 1.5 million women in 2022 in Belgium were of the age to be affected by perimenopause (40-65 years)[121]. This represents more than a quarter of women in Belgium of all ages. No specific estimates of the burden due to perimenopause exist, however, several conditions are associated with this transition. A global survey published in 2021 of women in the general population reporting menopausal symptoms found that 40% of women in Europe reported severe-to-moderate symptoms, 75% reported feeling worn out, and 69% reported insomnia[216].

In addition, a multi-country study analysing the quality of life of women in perimenopause found that 29% of the women sampled in Belgium reported a high number of symptoms, impaired quality of life, and a prevalence of depressed mood[217]. Estimates from the Belgian Health Interview Survey of 2018 showed that the way women rate their health is worse from around the age of 45 with a marked difference compared to younger women[218]. Many other causes can be linked to these mental health conditions (see section on mental health) but they do coincide with the onset of perimenopause and research is needed to clarify the links between the two in women in Belgium.

Managing symptoms of (peri)menopause can improve quality of life

Treating menopause symptoms is done primarily through hormone replacement therapy (HRT). Other options involve the management of symptoms and complications as they arise through the use of antidepressants, anti-anxiety medication, lipid-lowering medication, and medications to treat bone density loss. Unsurprisingly, data on progestogens and oestrogen use in Belgium shows that the majority of women using a combination of oestrogen and progesterone treatment are at the ages most affected by perimenopause and menopause.

HRT use has been falling in recent years and studies showed that women in Belgium are hesitant to use it when offered[216,219]. This hesitancy may be a result of a lack of awareness around risks and complications with menopause and with its treatment (including misinformation on the risks of treatment and cancer) as well as stigma and taboo around the condition[219]. Some studies have found a slightly elevated risk of breast cancer, blood clots, and stroke with some forms of HRT but for most women, the benefits outweigh the risks. As a result, many women endure symptoms without relief[220]. The average price for treatment ranges around €160-200 per year for HRT for symptoms of perimenopause in women and the costs may discourage some from seeking treatment[221].

1.1. Policy implications

On the 8 of February 2023, the Belgian Senate heard a resolution to define a national policy on menopause and perimenopause in recognition of the high burden symptoms can place on women and the larger impact on society and the economy of this burden[222]. The resolution proposed a better understanding of early menopause, HRT and its provision, and more research into this field. The resolution also called for more coordination between health sectors, businesses, and the wider society to lift taboos around menopause and ensure access to care and treatment. Menopause is a reality for many women actively participating in the workforce, as well, and sensitising employers on how to ensure the well-being of their employees should include provisions for menopause. However, care must be taken that these added measures do not contribute to further discrimination and stigmatization of perimenopause symptoms[223]. The need for targeted care of women in menopause could also be strengthened by the provision of care through specialised centres.
The Belgian Menopause Society is a group of physicians and healthcare providers interested in menopause and related topics[224]. They promote building the scientific

basis for improving the understanding of and care for women experiencing perimenopause and menopause.

2. CARDIOVASCULAR DISEASES

Cardiovascular disease (CVD) is a general term to describe conditions affecting the heart or blood vessels. The four main types of CVD are coronary heart disease, cerebrovascular disease, peripheral arterial disease, and aortic disease[225]. Many people do not experience any symptoms in the early stages of coronary heart disease (also called ischemic heart disease). In addition, women often experience other, sometimes less noticeable symptoms than men[226,227]. However, if left untreated, the narrowing of the coronary arteries (atherosclerosis) progresses and disabling symptoms may occur. The discomfort experienced when the heart muscle is lacking oxygen is called angina pectoris.

KEY MESSAGES

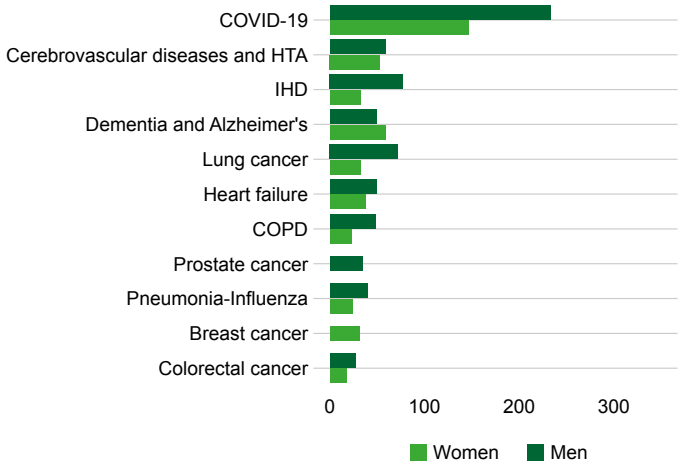
- One in three heart attacks in Belgium occurs in women
- Cardiovascular diseases are the main cause of death in women
- Women with coronary heart disease have worse risk factor profiles compared to men
- Under-recognised risk factors influenced by gender contribute to cardiovascular disease in women
- Guidelines for prevention and treatment of coronary heart disease are based on clinical studies that mainly include male patients, as women are generally underrepresented in clinical studies for cardiovascular disease

One in three heart attacks occurs in women

In Belgium, about 1% of women reported angina pectoris[228]. When the blockage of the blood flow to the heart is complete, the heart cells may die or suffer from serious damage. This is called a myocardial infarction or heart attack. In Belgium, angina pectoris and acute myocardial infarction occur more frequently in men than in women. Nevertheless, out of the 20,253 cases of acute myocardial infarction recorded in 2017, approximately 1 in 3 were women[228].

Cardiovascular diseases are the main cause of death in women

Together with tumours, CVDs are the main cause of death among women in Belgium[229]. When looking at specific causes of death in 2020, cerebrovascular diseases and arterial hypertension were the third highest cause of death in women in Belgium after COVID-19 and dementia (Figure 17). Heart failure ranked fourth and ischemic heart disease or coronary heart disease was the fifth cause of death in women. In men, cerebrovascular diseases and arterial hypertension were the fourth cause of death, with ischemic heart disease or coronary heart disease in the second place[229].



Source: Own calculation based on data provided by Statbel[186]

Figure 17 • Ranking of the main causes of death (all ages) by age-adjusted mortality rates by sex, Belgium, 2020

Women with coronary heart disease have worse risk factor profiles compared to men

Risk factor management is a major part of the prevention of complications of coronary heart disease in both women and men. A large European study including Belgium found that even though the difference in medication intake among women and men with coronary heart disease was minimal, women had substantially worse risk profiles compared to men. Specifically, they were less likely to reach recommended levels of physical activity and more likely to be obese compared to men. Women were also less likely to reach cholesterol and diabetes control targets[230]. A possible explanation for these gender differences is that clinical trials for the prevention and treatment of coronary heart disease mainly include male patients, as women are generally underrepresented in clinical studies for CVD[231]. It is also possible that women may need lower or higher doses of medication for coronary heart disease control.

Under-recognised risk factors influenced by gender contribute to cardiovascular disease in women

The main, well-established risk factors for CVD for both men and women include hypertension, dyslipidaemia, diabetes, obesity, unhealthy diet, sedentary lifestyle, and smoking. However, there are also sex-specific risk factors linked to cardiovascular disease in women, such as premature menopause, gestational diabetes, hypertensive disorders of pregnancy, preterm delivery, polycystic ovary syndrome, and systemic inflammatory and autoimmune disorders. Finally, there is a range of under-recognised risk factors that can be influenced by gender. These gender-influenced risk factors include psychosocial risk factors, abuse and intimate partner

violence, socioeconomic deprivation, poor health literacy, and environmental risk factors, though, for many of these risk factors, the scientific community is only beginning to understand how they might interact or increase risk of cardiovascular disease[231]. Knowledge of CVD risk factors and prevention in vulnerable communities is low[232]. However, there seems to be little difference between women and men in terms of risk factor awareness and information provided by healthcare professionals for coronary heart disease[233].

2.1. Policy implications

The 4 Belgian organisation actives in cardiology have called for a national plan for cardiovascular disease to help raise the profile of the cardiovascular burden in Belgium. To this end, they organised an information session for the Chamber of representatives on the 20th of October 2022[234]. To date, no national plan has been adopted. There is also no EU-wide cardiovascular health plan, although this is also a priority action for the European Society of Cardiology[235].
Timely diagnosis and treatment remain of great importance to reduce the burden of CVD in women. For timely diagnosis, increasing awareness of the symptoms of CVD in women is paramount. CVD screening and prevention is another important pillar for reducing the burden of CVD in women. This includes secondary prevention interventions aimed at risk factor control and lifestyle. This is especially important considering that women tend to have worse risk factor profiles than their male counterparts. In that regard, it is encouraging that there is evidence of little difference in awareness of risk factors for CVD between women and men. Finally, special attention should be given to the inclusion of women in clinical research.

3. CANCER PREVENTION

There is a high burden of cancer among women in Belgium, much of which can be prevented through different actions throughout the life course. Initiatives such as HPV vaccination in adolescence, and regular mammograms and pap smears in adulthood can prevent cancers or improve survival through early detection. This section presents data from different ages, from vaccination in teenagers to cancer screening throughout adulthood. Prevention actions in early adulthood also influence cancer risks in late adulthood.

KEY MESSAGES

Good take up of HPV vaccination in boys but vaccination rate remain too low for boys and girls

There are important regional differences in cancer screenings in Belgium

Good uptake of HPV vaccination in boys but vaccination rates remain too low for boys and girls

Since 2019, vaccination for human papilloma virus (HPV) has been offered free of charge to girls and boys within the organised vaccination programme by the language Communities; 1st year of secondary school in the Flemish Community and 2nd year of secondary school in the French Community. Since 2022, HPV vaccination has also been possible and partially reimbursed for girls and boys independent of the school-based programmes aged 12 to 18 years by the National Institute for Health and Disability Insurance (INAMI-RIZIV).

There is no national vaccination registry in Belgium. Information on vaccination coverage is collected through surveys in the French and Dutch Communities. These surveys differ in their methodologies and representativeness. The 2019 survey showed that in the Walloon Region and the Brussels-Capital Region, 50% of girls and 45% of boys had received the two doses of HPV vaccination, well below the WHO-recommended 90% coverage[236]. In the 2020 survey in the Flemish Region, 84% of girls and 77% of boys had received two doses.

Cancer screening tends to be higher in the Flemish Region compared to the Walloon and the Brussels-Capital Regions

In Belgium, screening programmes are organised by the regional authorities. In 2021, the coverage for breast cancer screening was higher in the Flemish Region with 68% of women covered, compared to the Walloon Region with 53% and to the Brussels-Capital Region with 49%. For cervical cancer screening, only the Flemish Region has a screening programme in place while a programme is currently in development for the Walloon Region. Nevertheless, a large proportion of cervical cancer screening (pap smears) is carried out at the initiative of the women or their physicians. In 2021, the coverage was quite comparable among the regions, around 53%. In 2021, the coverage for colorectal cancer was higher in the Flemish Region with 66% of people covered, compared to the Walloon and Brussels-Capital Region with 33%.

3.1. Policy implications

There is a need to develop a national vaccination registry

Vaccination registries are available or in the process of being developed in most European countries. The adoption was recommended by the European Council and WHO, as they provide added value for individuals as well as public health authorities and vaccine providers. They help general practitioners to support vaccine adherence and appropriate decision-making for individuals. They provide population data on vaccination use for surveillance purposes and help guide efforts to improve vaccination coverage to reduce vaccine-preventable disease[237].

Attention to improving coverage of cancer screening programs is needed in all regions

The efforts to develop cervical cancer screening programs in the Brussels-Capital Region and the Walloon Region must be strengthened. Attention to improving the existing programs for breast cancer and colorectal cancer screening is needed.

HEALTH IN THE THIRD AGE

Women in the last phase of their life, also known as the third age, face unique and multiple health challenges. With advancing age, numerous conditions become more prevalent and can have a big impact on quality of life. These age-related health issues present a considerable societal and healthcare system challenge. Consequently, they are generally high on the public health agenda. While there are many unique challenges for women in the third age of life, this report highlights three key topics which have a high impact on health: osteoporosis, falls and fractures, and dementia.

Women live, on average, longer than men and as such age-related health issues are particularly relevant. These issues can include frailty, multimorbidity, and dementia. Additionally, certain conditions have a higher prevalence in women in Belgium over 65 years, such as musculoskeletal diseases and urinary incontinence. It is important to acknowledge the heterogeneity within the third age group, often characterised by the concept of double ageing, distinguishing between the 65-84 age group and the 85 and above group, each having specific health needs and concerns.

1. OSTEOPOROSIS, FALLS AND FRACTURES

KEY MESSAGES

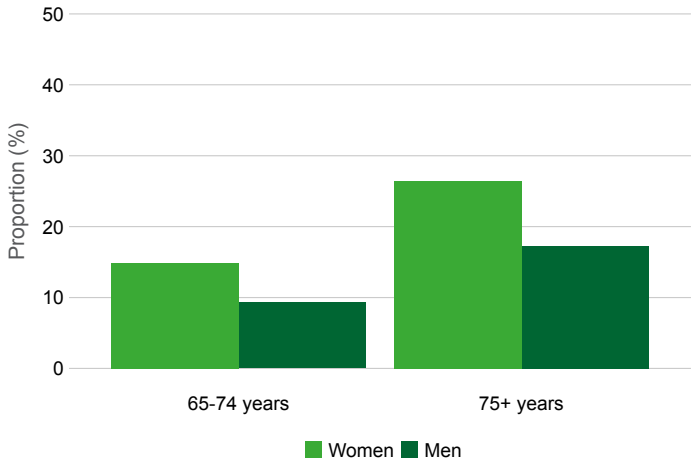
- Falls are a major cause of mortality and morbidity among older women
- Osteoporosis is one of the main causes of fractures and affects women more than men
- The incidence of hip fracture is higher among women than men
- Multifactorial interventions including fall prevention and osteoporosis treatment are crucial for fracture prevention in older patients in Belgium

Falls are a major cause of mortality and morbidity among older women

Fractures occur in the older population because of skeletal fragility and are usually precipitated by a fall[238]. Falls are one of the most common causes of fractures in third-age women and account for 87% of all fractures in older people[239]. Every year, an estimated 30 to 40% of people over the age of 65 will fall at least once[239]. In the majority of registered falls (58%), the patient was female[240]. The fall incidence of the older population in Belgium is demonstrated by age group and sex in Figure 18[241].

Falls are one of the major causes of death and morbidity in older adults. One-third of fall cases lead to moderate to severe injuries, fear of falling, loss of independence

or death[239]. Falling is a major cause of death in people aged 60 years and older, particularly in women[242]. There are more deaths related to falls in women than men among third-age people in Belgium.
Among older people, it is estimated that one in ten falls causes a hip fracture or another serious injury[242]. These fractures are mostly due to low-impact injuries in osteoporotic bones. In addition, people who have fallen once are at a higher risk of falling again.



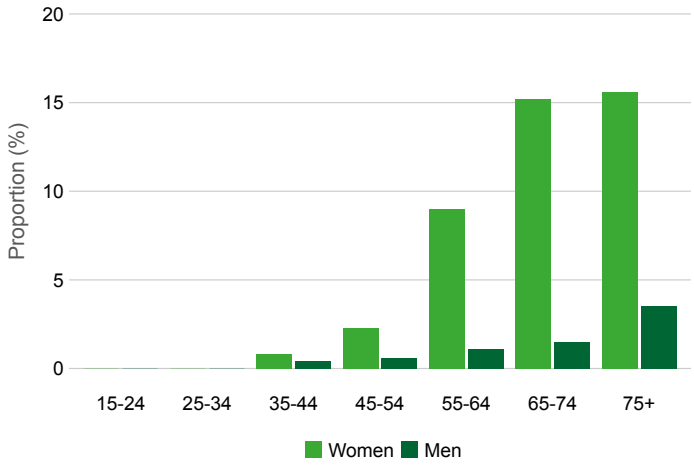
Source: Belgian Health Interview survey[243]

Figure 18 • Fall incidence in the population aged 65 years and older, by sex and age group, Belgium, 2018

Osteoporosis is one of the main causes of fractures and affects women more than men

Osteoporosis is a disease that results from impaired bone microarchitecture and reduced bone mineral density. Based on the data from the Belgian Health Interview Survey, the self-reported prevalence of osteoporosis in women from the age of 55 was estimated at 13%, which is substantially higher compared to men with a prevalence of 1.8%[244] (Figure 19). Another study estimated that 22% of women and 6.6% of men aged 50 years or more had osteoporosis in Belgium[245]. Besides the disproportional difference in prevalence by sex, there is an additional gender issue related to osteoporosis. According to the literature, male osteoporosis is underestimated, underdiagnosed, and undertreated which may be exaggerating the difference in prevalence[246,247]. The incidence of fragility fractures in Belgium is expected to rise by more than 23% between 2019 and 2034[248].
Older women are particularly vulnerable to osteoporosis due to menopause[249]. During menopause oestrogen levels decrease and the normal bone turnover cycle is impaired by oestrogen deficiency resulting in increased bone loss[249]. Women are

particularly vulnerable during the first few years after menopause[250]. Oestrogen deficiency plays an important role in osteoporosis development for both genders, but it is more pronounced for women and at younger (perimenopausal) ages compared with men. Thus, women tend to have an earlier onset of bone loss at 65 to 69 years compared to 74 to 79 years for men, and women tend to have a faster rate of bone loss (3.4-4.8% compared to 0.2-3.6% for men)[251]. Consequently, osteoporosis patients suffer from bone fragility and show an increased risk of fracture. In high-income countries, one in three women and one in five men were estimated to sustain an osteoporotic fracture in their remaining lifetime from the age of 50 years[252].



Source: Belgian Health Interview survey[243]

Figure 19 • Prevalence of osteoporosis by age and sex, Belgium, 2018

The incidence of hip fracture is higher among women than men

Hip fractures are considered a principal cause of morbidity and mortality among people over the age of 65 years[253]. Hip fracture is the most serious consequence of osteoporosis in terms of morbidity, mortality and health care expenditure[248]. Falls are considered the main cause of hip fractures, whereas osteoporosis may not always be associated with hip fractures[253]. In Belgium, the hip fracture incidence in people aged 65+ is slightly higher in women (2.3%) compared to men (1.9%)[244]. However, this estimate may be underestimated as older people with a hip fracture who died in the past year are not included. Although the sex difference in hip fracture incidence is negligible, women remain more at risk for hip fractures due to the higher osteoporosis prevalence and fall incidence.

1.1. Policy implications

The WHO considers fracture prevention as one of the public health priorities[249]. Public health programmes should target risk groups, and use healthcare professionals who will apply a multifactorial approach and take all risk factors into consideration[254]. Fracture prevention should focus on multifactorial interventions and the identification of high-risk groups, for example by osteoporosis screening and reducing fall risk. The implementation of routine screening for older men and those at risk for osteoporosis is crucial if we are to improve the outcomes of men with osteoporosis and reduce gender disparity in osteoporosis care[247.] To achieve this goal more collaboration between general practitioners and other health care professionals is necessary in fracture prevention.

Fracture prevention combined with fall prevention is crucial to reduce fracture incidence

Fracture prevention is one of the public health priorities worldwide and includes reducing the number of falls, reducing the trauma associated with falls, and maximising bone strength[238]. Multiple measures can be taken to minimize the risk of fractures in the older population and those are based on the main causes of fractures, namely osteoporosis and falls.

In 2003, the European Union adopted a Plan of Action for the prevention of fractures and frailty[255]. The plan recommends public health campaigns to increase the knowledge of the general public and clinicians on the risks of fractures, behavioural public health campaigns, and a strengthening of care and rehabilitation. The plan also includes a call for analysis of the economic impact of fractures in Europe. This was estimated by one study at 4,182 euros per patient in Belgium, of which 76% were women[256].

In Belgium, the Belgian Bone Club is a non-profit scientific organisation that has published recommendations on the management of osteoporosis and fall prevention. These recommendations are targeted to clinicians in helping to identify and manage patients at high risk of fractures[257].

Treatments for osteoporosis are available

Older women are particularly vulnerable to osteoporosis due to menopause[249]. Different effective treatments for osteoporosis are available and menopausal osteoporosis is treated with the use of hormones. Hormone Replacement Therapy (HRT) rapidly normalizes bone turnover and preserves bone mineral density, resulting in a significantly reduced number of fractures[249]. Hip and vertebral fractures were reduced by 34%, and the overall decrease in fracture risk was 24% in women treated with HRT. Standard HRT is effective in preventing bone loss due to menopause and decreases the incidence of osteoporotic fractures. HRT can be considered one of the first-line therapies for the prevention and treatment of osteoporosis-related fractures. However, the initiation of standard HRT after the age of 60 years for the exclusive reason of fracture prevention is not recommended, as there is a potential risk of long-term complications, namely breast cancer. Thus, the implication of HRT after the age of 60 years must take into account potential long-term benefits and risks.

Interventions to reduce falls are multidimensional

Falls prevention is essential to avoid fractures, improve quality of life and over-burdening healthcare systems[258]. Identifying risk factors is critical in developing fall prevention strategies to reduce the number of falls in the older population. Several interventions seem successful in fall prevention, for example, strength and balance training, blood pressure checks to correct for potential hypotension, vision checks and a safer environment[254]. Multiple fall prevention interventions can be coupled with fracture prevention strategies to reduce the incidence of falls and consequential fractures.

Literature suggests that social support could act as a protective factor against falls[259]. Lonely older adults have increased odds of future falls[260]. Strategies for tackling loneliness in older people may help decrease fall-related morbidity and mortality. Loneliness is higher in older women and has a greater impact on physical health-related quality of life compared to older men[261]. This emphasises the need to combat loneliness, particularly in older women.

2. DEMENTIA

Dementia is a syndrome, or a group of related symptoms, associated with an ongoing decline of brain functioning[262]. Dementia can be caused by different diseases that destroy nerve cells and damage the brain over time. These changes in the brain affect memory, thinking, and the ability to perform daily activities. Often, dementia also causes changes in mood, emotional control, behaviour, and motivation[263].

Different diseases cause different types of dementia. The most common cause of dementia is Alzheimer's disease, which is thought to be responsible for 60-70% of all dementia cases[263]. Other common types of dementia are vascular dementia, dementia with Lewy bodies and frontotemporal dementia[264]. Dementia or dementia-like symptoms can also be associated with a stroke, some infections, harmful use of alcohol, repetitive physical brain injuries, nutritional deficiencies[263], and untreated hypertension[265], or can be caused by rare diseases or conditions such as Huntington's disease, corticobasal degeneration, progressive supranuclear palsy, and normal pressure hydrocephalus[264].

KEY MESSAGES

The majority of people with dementia in Belgium are women	**Alzheimer's disease and other dementias are the main cause of death in women**	**Women have a greater total disease burden due to dementia**	**Women are more often caregivers for people with dementia**

The majority of people with dementia in Belgium are women

The number of people living with Alzheimer's disease and other dementias in Belgium in 2020 was estimated at 23,370, of which 60% were women[38]. Women are disproportionally affected by Alzheimer's disease, the most common type of dementia (60-70% of all dementia cases[263]). In contrast, the rates of non-Alzheimer's dementia do not differ by gender. One of the reasons that women are more likely to develop Alzheimer's disease than men is that women tend to have a higher life expectancy, and the most important risk factor for Alzheimer's disease is advanced age. This is reflected in the estimated prevalence rates (number of cases per 100,000 people) in Belgium, with the large differences between sexes greatly reducing when correcting for age[38]. The prevalence rate is estimated at 241 per 100,000 for women, versus 164 per 100,000 men. When correcting for age using the European Standard Population, the rates are 198 per 100,000 women and 192 per 100,000 men.

Research suggests that the immune system may also play a role in women's higher likelihood of developing Alzheimer's disease[266]. In addition, the physiological changes that come with menopause may also contribute to the development of Alzheimer's disease. The menopause transition is characterized by a sudden decrease in the oestrogen levels. Oestrogen plays an important role in the immune system and the drop may explain the increased vulnerability of the brain during and after the menopause[267,268].

Alzheimer's disease and other dementias are the main cause of death in women in Belgium

In 2020, Alzheimer's disease and other dementias were the main cause of death in women of all ages after COVID-19, with an age-adjusted death rate of 58.8 per 100,000 in Belgium[229]. The absolute number of deaths due to Alzheimer's and other dementias in women (4,751 deaths) was more than twice as high as in men (2,200 deaths).

Women have a greater total disease burden due to dementia

Alzheimer's disease and other dementia were the fourth most important cause of DALYs in women, compared to being the fourteenth cause of DALYs in men. A large portion of this difference can be accounted for by the greater number of older women than men. When we factor out age, the impact of dementia is comparable between women and men: Alzheimer's disease and other forms of dementia rank ninth for women and tenth for men. This shift can be attributed to the fact that, on average, women tend to live longer than men.

Neurological diseases caused 99,530 DALYs in women in Belgium in 2020, of which more than 60% were due to Alzheimer's disease and other dementias. As such, Alzheimer's and other dementias make up 5.2% of the total burden of disease in women in Belgium, compared to 2.7% in men[38].

Women are more often caregivers for people with dementia

Informal caregivers (family, spouses) play a very important role in providing support and care for people with dementia. Research suggests that the burden of informal care lies mainly with women, who make up more than 70% of caregivers of people with dementia[269]. This role can be difficult as caregivers often have an added mental, physical, and economic burden associated with caregiving. This area is understudied

in Belgium and as thus specific impacts are not well described. Women carry the majority of the burden of informal care for people with dementia. Policies should be put in place so that informal caregivers for people with dementia receive the recognition and the financial and emotional support they need.

2.1. Policy implications

Currently, only Flanders has an active strategy on dementia (2021-2025)[270]. The strategy focuses on a number of areas for dementia including better surveillance, a focus on prevention, improving the quality of care and person-centred support both for people living with dementia as well as care givers.
To decrease the burden of Alzheimer's disease in women, continued investments into research on the underlying causes of Alzheimer's are needed. The results of these efforts can be used for the development of preventive measures and treatments. In addition, it remains important to increase awareness of protective lifestyle changes (exercise, diet, sleep, social and cognitive activities) and invest in related evidence-based preventive measures for Alzheimer's disease in women.

CONCLUSION

Women's health is a critical component of public health. Some issues like pregnancy, menopause, endometriosis or breast cancer are unique to women. But for many diseases, like dementia, mental illness, and musculoskeletal disorders, women in Belgium are bearing a disproportionate burden compared to men. In addition, while women have a longer life expectancy than men, many of those additional years are spent with disability. Understanding these differences and the systems that underly inequalities can help to develop public policies that will close gaps and improve health for all. This report shows that while women tend to be more health-seeking and equipped to be partners in disease prevention, social barriers and prejudices can mean they are not always listened to nor are their needs met. This is a problem that is not unique to Belgium. Women around the world often take on more informal care roles in addition to their own jobs, and societal expectations of how women should act are instilled from an early age.

Indeed, Belgium is above average when it comes to key metrics like maternal mortality and has made progress in access to resources like contraception, fertility treatments, and cancer screening and prevention. Another key finding of this report is the numerous gaps in information that can support better decision-making and care for women including an epidemiological profile of a number of women-only diseases (e.g. endometriosis, polycystic ovarian syndrome), as well as the routine inclusion of gender as a dimension in existing surveillance mechanisms. This is especially true of areas with already robust systems, like occupational health, that fail to fully account for gender dimensions. Finally, women across all the life course included in this report have consistently worse mental health, a disparity that begins at an early age. Support for screening, management, surveillance, and care are critical to relieve this serious burden and improve quality of life. This report is only a beginning and improvements in the health of women will translate to improvements for the whole of society.

In summary, this report highlights a few key areas for growth for improving the health of women in Belgium.

KEYS AREAS FOR IMPROVEMENTS

1. The development and implementation of healthcare treatment protocols must systematically take gender into account and be adaptive to the unique needs of the person.
2. Belgium needs to strengthen the monitoring and surveillance of a number of diseases affecting women including infertility, endometriosis, polycystic ovarian syndrome, and post-partum depression.
3. The mental health of girls and women needs more attention and should work throughout the life course: from reducing stress in schools and the workplace, to improving screening for mental health symptoms, and preventing suicide.
4. The sexual health of girls and women could be improved with more education, reducing inequalities in access to contraception, and screening for and treatment for the causes of infertility.
5. Disease prevention strategies should include and consider a dimension on gender to reduce inequalities and improve outcomes throughout the life course.

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