

Gender Paradox of Suicide in Comparative Perspective: East–West Differences in Europe



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Abstract

The gender paradox of suicidal behavior refers to the consistent epidemiological finding that women report higher rates of suicidal ideation and non-fatal suicidal behavior, whereas men exhibit substantially higher suicide mortality. Although this paradox has been documented globally, its manifestation varies considerably across European regions. Eastern European countries, particularly post-Soviet states, demonstrate exceptionally high male suicide rates and wider gender gaps compared with Western Europe. This review examines the gender paradox of suicide from a comparative East–West European perspective, focusing on epidemiological patterns, sociocultural determinants, alcohol-related harm, economic transitions, mental health systems, and gender norms. Evidence suggests that the East–West divide reflects differences in hazardous alcohol consumption, socioeconomic instability, masculinity norms, healthcare access, and family structures. The review also discusses methodological limitations in cross-national comparisons and outlines implications for suicide prevention policy.

Keywords: suicide, gender paradox, Eastern Europe, Western Europe.

Introduction

Suicide represents a major public health challenge in Europe, with substantial heterogeneity in mortality rates across countries and demographic groups [5,6,16,20]. One of the most robust findings in suicidology is the “gender paradox” of suicidal behavior: women more frequently report suicidal thoughts and attempts, whereas men die by suicide more often [2]. This paradox has been consistently observed across cultures and historical periods, although the magnitude of the gender gap differs markedly between regions [7]. Europe provides a particularly important setting for examining the gender paradox because of its pronounced East–West divide in suicide mortality [12,36]. Countries in Eastern Europe and the former Soviet Union historically reported some of the highest suicide rates worldwide, especially among working-age men [9–11]. In contrast, many Western European countries experienced gradual declines in suicide mortality during recent decades, accompanied by narrower gender disparities [36].

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The East–West contrast reflects broader social, economic, and cultural transformations. The collapse of the Soviet Union and the transition to market economies produced profound psychosocial stressors, including unemployment, social disintegration, widening inequality, and declining life expectancy [1]. These changes disproportionately affected men, particularly through increased alcohol-related mortality and psychosocial vulnerability [1]. Consequently, male suicide rates rose dramatically in several post-Soviet states during the 1990s [34].

At the same time, women in both Eastern and Western Europe continue to demonstrate higher rates of non-fatal suicidal behavior, depression, and help-seeking [6]. Thus, the paradox persists despite regional differences in mortality patterns. Understanding why the gender gap is wider in Eastern Europe requires an integrated examination of sociocultural norms, alcohol consumption, economic instability, healthcare systems, and methods of suicide.

This review aims to analyze the gender paradox of suicide in comparative perspective between Eastern and Western Europe and to identify mechanisms underlying regional differences in gender-specific suicide mortality.

Methods

This narrative review synthesizes epidemiological, sociological, and public health literature on gender differences in suicide across Europe. Relevant studies were identified through searches of major biomedical and social science databases, including PubMed, Scopus, and Web of Science, using combinations of the following keywords: “suicide,” “gender paradox,” “Eastern Europe,” “Western Europe,” “male suicide,” “female suicide,” “alcohol,” “post-Soviet,” and “gender differences.” Particular attention was paid to comparisons between post-Soviet countries (e.g., Belarus, Russia, Lithuania, Latvia, Ukraine) and Western European countries (e.g., Sweden, Germany, France, the United Kingdom, and the Netherlands).

Results

Across Europe, male suicide rates exceed female rates in

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nearly all countries. However, the male-to-female suicide ratio varies substantially. In Western Europe, ratios commonly range between 3:1 and 4:1, whereas in Eastern Europe they may exceed 6:1 or even 8:1. The highest gender disparities have historically been reported in Belarus, Lithuania, Latvia, Russia and Hungary. In contrast, smaller gender gaps are observed in Scandinavian and Mediterranean countries. Women consistently report higher prevalence of depression, greater frequency of suicidal ideation, more non-fatal suicide attempts, and increased healthcare utilization for mental health problems. Men, however, more often employ highly lethal suicide methods such as hanging and firearms, contributing to higher mortality.

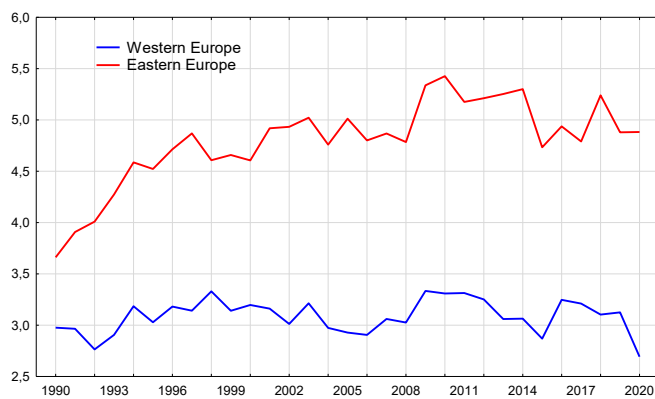
The gender paradox also varies across the life course. Among adolescents, the gender gap in suicide mortality is smaller. Female suicide attempts are particularly common during adolescence, often associated with emotional dysregulation and interpersonal stress. Middle-aged men in Eastern Europe demonstrate the highest suicide mortality. This reflects the cumulative effects of alcohol dependence, unemployment, divorce, chronic illness, social isolation. In older age groups, suicide rates increase among men due to loneliness, bereavement, and declining physical health. Eastern European elderly men remain particularly vulnerable because of weaker social support systems.

The average gender gradient of suicide rates since 1990-2020 was significantly higher in Eastern Europe than in Western Europe (Table 1).

Table 1. The East-West gender gap in suicide rates in Europe.

Region	1990	2020	Mean	Minimum	Maximum	Std. Dev.
Western Europe	3.0	2.7	3.1	2.7	3.3	0.16
Eastern Europe	3.7	4.9	4.8	3.7	5.4	0.41

Between 1990 and 2020 the gender gradient of suicide rates in Eastern Europe increased by 32.4 %, while in Western Europe it decreased by 32.4 %. The gender gradient of suicide rates in Eastern Europe rose sharply in the 1990s, reaching 1:5 by early 2000s (Figure 1).



Figures 1. Trends in the gender gap in suicide rates in Western and Eastern Europe

In Western Europe, this ratio increased to 1:3. The opposite trends in gender gradients of suicide rates have led to a widening gap in the magnitude of these indicators between the Eastern and Western parts of the continent. For example, while the gender gradient of suicide rates in Eastern Europe was 23.3% higher than in Western Europe in 1990, the difference was 81.5% in 2020.

Eastern Europe experienced dramatic fluctuations in suicide mortality during the late Soviet and post-Soviet periods. Male suicide rates increased sharply during periods of political and economic instability, especially during the 1990s transition crisis. In some post-Soviet countries, male suicide mortality reached levels exceeding 50–60 per 100,000 population during the 1990s. Middle-aged men constitute the highest-risk group.

Several features characterize Eastern European suicide patterns including extremely high male mortality, strong association with alcohol, economic and social disintegration, and low help-seeking behavior (Table 2).

Table 2 Gender Paradox of Suicide in Eastern and Western Europe

Indicator	Eastern Europe	Western Europe
Male suicide mortality	Very high	Moderate
Female suicide mortality	Low to moderate	Low
Male-to-female suicide ratio	Frequently 5:1–8:1	Commonly 3:1–4:1
Female suicide attempts	High	High
Hazardous alcohol consumption	Very high	Moderate
Dominant drinking pattern	Episodic binge drinking of spirits	More regular moderate drinking
Alcohol-related suicide burden	Strong	Moderate
Masculinity norms	More traditional and rigid	More flexible
Help-seeking among men	Low	Higher
Mental healthcare accessibility	Often limited	Generally well developed
Social welfare protection	Weaker	Stronger
Suicide prevention infrastructure	Variable and often underdeveloped	More comprehensive
Common male suicide methods	Hanging, violent methods	Hanging, poisoning, firearms
Social stigma toward mental illness	High	Lower
Economic transition stress	High in post-Soviet countries	Lower

Western European countries generally exhibit lower suicide mortality, smaller gender gaps, stronger mental healthcare systems, lower prevalence of binge drinking.

Although male suicide still predominates, several protective factors reduce the magnitude of the disparity including better mental health services, greater gender equality, lower alcohol-related harm, and stronger welfare systems. Earlier detection and treatment of depression and substance use disorders contribute to suicide prevention. Countries with higher gender equality tend to demonstrate lower male suicide mortality and narrower gender gaps. Although alcohol consumption remains substantial in parts of Western Europe, drinking patterns are generally less characterized by extreme episodic intoxication. Comprehensive social protection buffers the psychological effects of unemployment, divorce, and economic stress.

Traditional masculine norms contribute substantially to elevated male suicide mortality. Men are often socialized to suppress emotional vulnerability, avoid help-seeking, demonstrate self-reliance, and externalize psychological distress through substance use or aggression. These norms appear particularly pronounced in Eastern Europe, where hegemonic masculinity remains closely associated with toughness, alcohol consumption, and economic success. Failure to meet socially prescribed masculine roles during economic crises may generate profound shame, hopelessness, and social isolation.

Women generally exhibit higher rates of depression, anxiety disorders, suicidal ideation, and non-fatal attempts. However, women are more likely to seek social support, access healthcare services, communicate emotional distress, and use less lethal methods. These behaviors reduce completed suicide mortality despite higher levels of psychological distress.

Alcohol constitutes one of the most important explanatory factors underlying East–West differences in male suicide mortality. Post-Soviet drinking culture is characterized by binge drinking, consumption of strong spirits, episodic heavy intoxication, and alcohol-related social disintegration. The association between alcohol and suicide is particularly strong among men.

Western European countries with wine-oriented drinking cultures generally exhibit weaker associations between alcohol and suicide compared with vodka-oriented drinking cultures in Eastern Europe. This distinction highlights the importance of drinking patterns rather than merely overall alcohol volume.

Discussion

The present review indicates that the gender paradox of suicide in Europe is profoundly influenced by alcohol-related, sociocultural, economic, and political factors. Although the paradox itself, higher rates of suicidal behavior among women but higher suicide mortality among men, is universal, the magnitude of gender disparities varies substantially between Eastern and Western Europe. The evidence suggests that alcohol serves as one of the principal mechanisms amplifying male suicide mortality in Eastern Europe and shaping the East–West suicide gradient.

A central finding emerging from comparative studies is that Eastern Europe demonstrates an unusually strong convergence of three risk factors: hazardous alcohol consumption, socioeconomic instability, and rigid masculine norms [1,13]. This combination creates an environment in which psychological distress among men is more likely to culminate in fatal suicidal behavior. In contrast, Western European societies generally possess stronger institutional and cultural protective mechanisms, including more developed mental healthcare systems, lower prevalence of binge drinking, broader social welfare protections, and greater acceptance of emotional help-seeking among men [6].

The role of alcohol appears particularly critical in explaining regional differences in male suicide mortality. In post-Soviet countries, alcohol consumption historically became embedded within social rituals, occupational culture, and masculine identity [15,18,19]. Under such conditions, alcohol became both a coping mechanism and a marker of male social integration. However, this pattern also produced profound vulnerability during periods of economic and social disruption.

The relationship between alcohol and suicide is also shaped by beverage-specific drinking cultures. Research consistently demonstrates that spirits-oriented drinking cultures exhibit stronger associations with suicide mortality than wine-oriented drinking cultures [21–26]. Eastern Europe historically demonstrates irregular heavy drinking episodes involving strong spirits consumed outside meals [19], whereas Mediterranean and some

Western European countries more commonly display moderate daily consumption integrated into social contexts [34]. Thus, drinking pattern appears more important than overall alcohol volume in predicting suicide mortality.

The collapse of the Soviet Union represents a pivotal historical context for understanding the East–West divergence in suicide mortality. The transition from centrally planned economies to market systems during the 1990s generated widespread unemployment, economic insecurity, social inequality, and institutional instability [1]. Men were disproportionately affected because male social status was closely tied to occupational identity, economic productivity, and the traditional role of family provider. Loss of employment and declining social status therefore produced not only material hardship but also existential and identity crises [4,20].

Within this context, alcohol frequently functioned as a maladaptive coping strategy. Heavy drinking temporarily alleviated anxiety, hopelessness, and social frustration but simultaneously intensified impulsivity, aggression, depressive symptoms, and interpersonal conflict [35]. Consequently, alcohol amplified both chronic vulnerability and acute suicide risk. Numerous studies from Belarus, Russia, Lithuania, and Latvia demonstrate close temporal associations between fluctuations in alcohol consumption and suicide mortality [15,18,19,22–32]. Periods of reduced alcohol availability, such as anti-alcohol campaigns, were often accompanied by declines in suicide rates, supporting the hypothesis of a causal relationship [34].

Importantly, alcohol influences suicide through multiple interacting pathways. At the biological level, acute intoxication impairs judgment, increases emotional lability, and lowers behavioral inhibition [18]. Alcohol intoxication may therefore transform transient suicidal ideation into immediate suicidal action. Chronic alcohol dependence further contributes to depression, cognitive impairment, social isolation, family breakdown, and unemployment, all of which independently increase suicide risk [19].

At the sociological level, alcohol contributes to erosion of social integration [4]. Chronic heavy drinking weakens family relationships, reduces occupational functioning, and increases marginalization. From a Durkheimian perspective, this process promotes conditions of anomie

and social disconnection associated with elevated suicide risk. Men appear particularly vulnerable because they often possess fewer emotionally supportive relationships outside occupational and drinking networks [4].

The review also underscores the importance of masculinity norms in shaping the gender paradox. Traditional models of masculinity prevalent in many Eastern European societies emphasize emotional restraint, toughness, self-reliance, and endurance of hardship [1]. Such norms discourage psychological help-seeking and stigmatize expressions of vulnerability. As a result, men may delay or avoid psychiatric treatment even in the presence of severe depression or suicidal ideation.

Alcohol consumption itself may serve as a culturally sanctioned means of expressing emotional distress among men. Rather than openly communicating psychological suffering, men may externalize distress through binge drinking, aggression, or risk-taking behavior [34]. This phenomenon partially explains why male suicide mortality is so closely associated with alcohol-related mortality in Eastern Europe [22-32].

In contrast, women generally demonstrate more adaptive help-seeking behaviors [3]. Women are more likely to disclose emotional distress, access mental healthcare services, maintain social support networks, and engage in communicative forms of self-harm [8]. Although women report higher levels of suicidal ideation and non-fatal suicidal behavior, these behaviors less frequently result in death because women tend to use less lethal methods and receive intervention earlier [14].

The distinction between suicidal behavior and suicide lethality is therefore fundamental to understanding the gender paradox. Men do not necessarily experience greater psychological distress than women; rather, distress among men more often culminates in lethal suicidal acts. Alcohol significantly contributes to this lethality by increasing impulsivity and facilitating violent methods such as hanging or firearms [34].

Method selection represents another important mechanism underlying East–West differences. Hanging remains highly prevalent in Eastern Europe, particularly among intoxicated men [33]. This method has extremely high lethality and limited opportunity for rescue. Western European countries, by contrast, have implemented more

extensive means-restriction strategies, including firearm regulation, bridge barriers, crisis intervention systems, and emergency psychiatric services [36]. Such interventions may reduce suicide fatality even when suicidal behavior persists.

Differences in healthcare infrastructure further contribute to the regional divide. Western European countries generally possess integrated community mental healthcare systems, early depression screening, suicide hotlines, crisis intervention programs, stronger primary care detection of mental disorders [33].

In many Eastern European countries, psychiatric care remains underfunded, institutionalized, and stigmatized. Mental illness continues to carry substantial social stigma, particularly among men, who may perceive psychiatric treatment as incompatible with masculine identity [34]. Consequently, depressive disorders and alcohol dependence frequently remain untreated until advanced stages.

Another important issue concerns the role of socioeconomic inequality and welfare systems. Countries with stronger welfare protections and lower inequality generally exhibit lower suicide mortality. Western European welfare states may buffer the psychosocial consequences of unemployment, divorce, and financial hardship through unemployment benefits, healthcare access, and social support programs [34]. By contrast, weaker social protections in parts of Eastern Europe intensify the psychological consequences of economic crises [36].

The review also suggests that changing gender roles may alter future suicide patterns. In several European countries, alcohol consumption among women has increased, particularly among younger cohorts [36]. Simultaneously, younger men may demonstrate greater openness to discussing mental health and seeking psychological support. These social transformations may gradually modify the traditional gender paradox, although evidence remains limited.

Importantly, the East–West distinction should not be interpreted too rigidly. Considerable heterogeneity exists within both regions. For example, Scandinavian countries combine relatively high suicide mortality with strong welfare systems, whereas some Southern European

countries demonstrate comparatively low suicide rates despite economic instability [6]. Cultural, religious, and historical factors therefore interact in complex ways with alcohol consumption and gender norms.

Several methodological limitations within existing research also deserve attention. Many studies are ecological and cannot establish direct causal relationships between alcohol and suicide at the individual level. Differences in suicide registration practices across countries may affect comparability. Underreporting remains possible in settings where suicide is heavily stigmatized. Furthermore, much of the literature focuses predominantly on male mortality, whereas female suicidal behavior in Eastern Europe remains insufficiently studied.

Future research should increasingly employ multilevel approaches integrating biological, psychological, sociological, and policy-level determinants. Longitudinal studies examining changing drinking cultures, evolving masculinity norms, and generational differences in help-seeking behavior are particularly needed. Greater attention should also be devoted to interactions between alcohol policy and suicide prevention strategies.

From a public health perspective, the findings of this review have important implications. Suicide prevention strategies in Eastern Europe should prioritize reduction of hazardous alcohol consumption through alcohol taxation, restrictions on availability, regulation of advertising, early treatment of alcohol dependence, screening for alcohol misuse in primary care.

At the same time, prevention efforts must address broader sociocultural determinants of male suicide. Campaigns promoting emotional openness, reducing stigma toward mental illness, and encouraging help-seeking among men may reduce suicide vulnerability. Community-based mental healthcare and crisis intervention services are also essential.

Importantly, prevention strategies should avoid narrowly medicalized interpretations of suicide. The East–West gender gradient demonstrates that suicide is deeply embedded within broader social and cultural environments. Alcohol-related male suicide mortality in Eastern Europe reflects not only psychiatric pathology but also structural determinants including economic insecurity, social disintegration, and restrictive gender norms.

Overall, the gender paradox of suicide in Europe illustrates the complex interaction between alcohol, masculinity, and social structure. Eastern Europe continues to experience disproportionately high male suicide mortality because hazardous drinking patterns intersect with economic instability and traditional masculine expectations. Western Europe, while not immune to the paradox, demonstrates that stronger welfare systems, less hazardous drinking cultures, and more accessible mental healthcare may substantially reduce suicide mortality. Understanding these interactions remains essential for the development of effective gender-sensitive suicide prevention policies across Europe.

Conclusion

The gender paradox of suicide remains one of the central phenomena in European suicidology. The contrast between Eastern and Western Europe demonstrates how social, economic, and cultural contexts shape gender-specific suicide mortality. Eastern Europe continues to experience disproportionately high male suicide mortality driven by hazardous alcohol consumption, socioeconomic instability, and restrictive masculinity norms. Western Europe, although not immune to the paradox, generally demonstrates lower mortality and narrower gender disparities due to stronger healthcare systems and social protections.

Effective suicide prevention therefore requires gender-sensitive and culturally informed approaches addressing both individual mental health and broader structural determinants of wellbeing.

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