

The Role and Influence of Age Crisis in the Formation of Female Suicidal Behavior (Toxicologic Parasuicide Screening Result in the Republic of Uzbekistan)

R. Kh. Khonbabaeva¹, A. A. Akalaeva¹, R. N. Akalaev^{1,2}, Kh. E. Anvarov¹

¹Republican Research Center of Emergency Medicine, Tashkent, Uzbekistan

²Center for Professional Development of Medical Workers, Tashkent, Uzbekistan

Abstract This article reports on the important role of age-related psychological crisis and types of women's response in conflict situations in different life periods, women's suicidal behavior peculiarities according to their personality types. The women personal characteristics in the formation of suicidal actions are considered and the nature of suicidal attempts is analyzed. Female suicide attempts that do not end lethally occupy a significant position among all toxicologic suicides. Of the suicidal risk factors, we have determined for women are certain age peaks, low socialization, disadaptation, personality traits, and the presence of a mental disorder. The main female suicide causes are events that lie on the emotional plane and are mainly used by women not for self-destruction, but to draw attention to their problems and to escape, i.e. to abstract themselves from a severe psychologically traumatic situation that they are unable to cope with, while the vital barriers remain strong.

Keywords Female suicidal behavior, Age crisis, Toxicosucide, Poisoning, Suicidogenic conflict, Auto-aggression, Disadaptation, Socialization problems

1. Introduction

In recent decades, acute poisoning has become an urgent medical problem and an important demographic determinant due to globalization, prevalence and premature deaths. [1,2,3]. The rate of hospitalization as a result of acute poisoning and toxic effects among men is significantly higher than the similar indicator among the female population by an average of 3.8 times, which indicates the gender risk factor for the occurrence of pathological condition. [4,5].

In Uzbekistan, where until recently the suicide problem was not so urgent, the dynamics of the suicide process, the ratio of suicide risk factors and protective factors are still poorly studied [6]. In recent years, due to the development of toxicological services, many lethal suicide attempts have been prevented. Our state is not a leader in the number of suicides (7.2 suicides per 100,000 people) not only among the countries in the rating of world statistics, but also among the countries of Central Asia, taking the third place after Kazakhstan and Kyrgyzstan [7,8].

According to the data of the Statistical Agency under the President of the Republic of Uzbekistan for January 2024, the population of Uzbekistan reached 36,799,728, of which men - 18,525,000, women - 18,274,800. [9]. The population

of Tashkent city and Tashkent region (the main contingent of toxicologic patients admitted to the RRCEM of Tashkent city) is 4,455,900 people, of whom 2,210,126 are women. The incidence of suicide attempts among the female population averages 960 cases per year. This is more than 1/3 of the female population of Tashkent and Tashkent region combined [7].

The number of toxicologic suicides has increased in recent years, especially among young women, which determines, undoubtedly, the relevance of the topic. Among patients in toxicology departments, female suicide attempts by self-poisoning are second only to acute alcohol poisoning [8]. The increase in the poisoning rate can be associated not only with the easy availability of various drugs, but also with changing perceptions of the so-called aesthetic side of suicide [10,11].

A significant number of works and publications concerning female suicidal behavior reveal polyproblematic factors of this phenomenon [4,1]. One of the significant indicators of suicidal activity is considered to be the existential age crisis experienced by women, which takes an intrapersonal conflict form and represents a serious psychological problem [12].

Due to the problem relevance, we conducted a toxicological parasuicide screening, to study the role and features of the age crisis influence in the female suicidal behavior formation.

The aim of the study was to analyze suicide attempts at age crises, to study the characteristics, personality types, motives of female suicidal behavior to identify the female suicidal behavior formation factors.

2. Material and Methods

Suicidal behavior was analyzed using catamnestic and clinical-psychopathological methods in 2229 women aged 18 to 65 years, hospitalized in the Toxicology Department of the Republican Research Center of Emergency Medicine (RRCEM) for 5 years (from 2019 to 2023) with acute poisonings of various etiologies. The age characteristics of women, personal meaning, factors of self-destructive behavior, personality traits, scope and content of suicidogenic conflict, and the reality of suicidal intentions were assessed. The above objectives were achieved by the author's specialized system of identification, registration and recording of suicidal activity - Questionnaire - an adapted multidimensional register for comprehensive study of all suicidality factors and triggers (copyright certificate No. 006763 dated 18.10.2023). The computer program "Parasuicide severity and recurrence risk screening test" patented by the authors (patent No. DGU 25885 dated 19.05.2023) was used to detect suicide risk assessment, risk dynamics of a repeated suicide attempt and subsequent patient routing. The Hamilton hospital scale was used for quantitative assessment of patients with depressive disorders.

The obtained parametric data were evaluated using descriptive statistics methods. Reliability of differences between the indicators of the study groups was assessed: for parametric data on the basis of Student's *t*-criterion, for nonparametric data - Mann-Whitney *U*-criterion and Fisher's ϕ -criterion. Statistical hypotheses were tested at the significance level of $p=0.05$.

The methods used in the work correspond to the international standard of research in the field of suicidology, have been validated for use in medical hospitals, and have been repeatedly used in international studies among the suicidological contingent of the female population.

The study protocol was approved by the Ethical Committee of the Health Ministry of the Republic of Uzbekistan (No. 9 of 25.12.2023).

3. Results and Discussion

Suicide attempts are known to include actions with a non-fatal result, when an individual intentionally, in order to change the situation, starts an unusual behavior through which, without the intervention of others, causes self-harm or deliberately takes a drug at a dose higher than prescribed [5]. Over 5 years, 5184 women addressed the RRCEM toxicology department (out of the total number of patients with suicidal poisoning - 6,448), of whom 2229 women were hospitalized. The average annual incidence of female suicide is 1,037 - 0.03% of the region's total female population.

The personal meaning category study of female suicidal

behavior showed that frequent among them were "call" (for help, sympathy...) - 28.92% of cases, "protest" - 25.90% and "escape" - 25.30%. Less common were "self-punishment" at 12.4% and "refusal" at 7.48%.

Among the reported female suicides, medication poisoning prevailed, accounting for almost 72.3% of all suicides. Acetic acid poisoning followed medication poisoning and accounted for an average of 22.9%. This is due to its widespread availability and constant traditional use in households and with food. According to the research results, it was revealed that despite the free sale prohibition of concentrated (above 10%) acetic acid, still people illegally purchase 70% and 96% acetic acid, in connection with which the trend of the patients with severe poisoning remains at a high level. The third place is occupied by alcohol poisoning - 2.70% and then by pesticides - 2.1%.

The drug of choice for suicide attempts in women were carbamazepine in 45.75% of cases, amitriptyline in 22.20%, diphenhydramine in 13.22%, followed by neuroleptics in 9.21%, non-steroidal anti-inflammatory drugs in 7.42% and hypotensive drugs in 2.20% of cases. The evidence of acute psychopharmaceuticals poisoning was in full compliance with the list of drugs legal for sale without a prescription since 2005. Various antidepressants that have appeared in large quantities in many first aid kits in recent years have been linked to sleep problems experienced by 41% of women who have attempted suicide. Sleep disturbances, according to the study, in 8% of cases led to mood and behavioral disorders, which were the first signs of mental health problems.

The psycho-emotional condition of patients showed sub-clinically pronounced depression in 28% of suicides and clinically pronounced depression in 13% of suicides according to the Hamilton scale, which were transient in nature and related to situational stress.

A significant part of suicides occurred in family and personal-vital spheres - 1137 (51%), followed by moral and ethical, communal and domestic, religious, intimate-sexual spheres - 1092 (49%). Women's true suicidality was assessed by comparing their own reports of the presence or absence of a desire to die with objective circumstances. The attempts were regarded as demonstrative, with no intention of taking their own lives, in 847 (38%) women and as a disadaptation reaction in 669 (30%).

The suicide attempt peaks were comparable and occurred at the age crisis peak in women. Suicide attempts from 15-19 years old were 30%, from 20-29 years old-38.5%, from 30-49 years old-22.2%, from 50-59 years old-3%, from 60 years old and above-2.7%.

Majority of women who committed suicidal poisoning attempt were non-working housewives, i.e. people with low level of socialization, working women were only 24%.

The number of women who applied for psychological/psychoneurological help was also analyzed: women who were on the "D" register (dispensary registration) in the psychoneurological dispensary - 4%, who had a parasuicidal attempt in the history - 5%, who applied (received medication)

privately - 14%.

Only 4% of women who made a toxicological suicide attempt had higher education, most of them - 93% had specialized secondary education, and 3% had unfinished school education.

There are many classifications of age crises in science that focus on the ages of postnatal ontogenesis, starting with Confucius, Jung, Erikson, Vygotsky, Litchko, and many others [13]. All classifications were considered and female patients with suicidal attempted poisoning were analyzed, taking into account all crisis groups, including mid-transition stages. The following groups were formed taking into account traditional and mental characteristics, national culture acceptable in a given society. For example, the accepted midlife crisis is considered to be the age from 30 to 40 years old, but among the surveyed patients and according to our numerous practical observations, the midlife crisis in women in Uzbekistan begins on average 5-10 years earlier. This is due to the early age of marriage, birth of children, low socialization...

Suicidal attempts of girls aged 15 - 19 years were related to the main causes of suicidal attempts in adolescents. According to the results of our research, the reasons were: a difficult family situation, a superficial, i.e. not serious and inattentive attitude of adults to solving the adolescents' problems, aggressive behavior (punishments, accusations), inability to really assess the situation and girls' uncriticalness, prohibitions on communication with the opposite sex, vindictiveness and unwillingness to forgive offenses on the part of the adolescents themselves. Young girls are more likely to commit suicidal acts of demonstrative, manipulative, and hysterical reactions.

In the age range from 20 to 29 years old, the reasons for female suicidal actions were related to the realization of themselves in a new family, to building relationships with new family members who are not always favorably inclined and with whom they have to live together. With the birth of children (2 or more), young women's basic needs are diminished (physical activity, lack of full sleep, unbalanced nutrition, social inhibitions). Personal disadaptation to changed life conditions and circumstances occurs. They are more likely to report suicidal intentions.

Suicidal attempts at the age of 30 - 49 years, were associated with serious problems in the family, these are interpersonal conflicts, loss of significant relationships (adultery, divorce, second families...). In 60% of the interviewees the reason was cheating husbands or the fact of having a second family. A significant part of suicides in women during the age crisis can be explained by overwork, hormonal changes, emotional burnout, chronic fatigue and asthenic condition.

With all the variety of causes of age crisis, its main markers, according to our observations, were: loss of regulation of life activity, loss of life prospects, unwillingness or inability to engage in self-analysis and self-development, shifting responsibility to others or other objective circumstances, in other words - existential crisis. In the process of experiencing this crisis, women experience transformation of values, views,

worldview, beliefs and attitudes, loss of value-sense orientations.

4. Conclusions

A significant part of the female suicides, can be categorized as anomic and/or egoistic suicide. This explains the manifestation of opposite forms of consciousness in the form of autoaggression and impulsiveness of personality: on the one hand, helplessness, isolation, emptiness, lack of moral purpose; on the other - permissiveness, loss of responsibility.

The study of female suicidal behavior showed that the most frequent attempts at self-poisoning occurred during age crisis periods in the form of total disharmony in response to conflict, characterized by helplessness, disadaptation, and inability to overcome change.

Age crisis, complicated by personal crisis experiences, often leads to a crisis of the value-sense sphere [14]. Personal crisis, is accompanied with painful experiences and loss of reference points, sense of loss and priorities of the future, which negatively affects the emotional and volitional sphere of a woman's life, productivity of activity and self-relationship (self-esteem, self-discipline, self-knowledge, self-control...).

The listed age peaks of suicidal activity prove that during existential crisis periods a woman needs to balance physical activity and rest, nutrition, sleep hygiene (if necessary and after consultation with a specialist take herbal adaptogens, antidepressants). During such period a woman needs understanding and support from her family and close people, as well as professional psychological help [15].

It is necessary to inform the female population about the stages of age crises, self-control and self-education skills with the help of employees of women's committees and primary health care specialists.

Practical help during age crises complicated by personal crises is directly related to the study of emotional burnout, depression, feeling of injustice, critical decline in self-esteem, and feelings of personal worthlessness. All this creates an urgent need for practice-oriented research aimed at providing psychological assistance in the constructive resolution of the age crisis, and solving personal value-semantic conflicts.

Conflict of Interests

The authors declare no conflict of interest.

This study does not include the involvement of any budgetary, grant or other funds.

The article is published for the first time and is part of a scientific work.

ACKNOWLEDGEMENTS

The authors express their gratitude to the management of the republican Research Centre of Emergency Medicine for the material provided for our study.

REFERENCES

- [1] Umansky M.S., Zotova E.P. Suicidal attempts: the ratio of men and women. *Deviantology*. 2018; 2 (1): p. 30-35. [in Russ.]
- [2] Miranda-Mendizabal A., Castellví P., Parés-Badell O., et al. Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. *International Journal of Public Health*. 2019; 64 (2): p. 265–283.
- [3] Moller C.I., Davey C.G., Badcock P.B. et al. Correlates of suicidality in young people with depressive disorders: A systematic review. *The Australian & New Zealand Journal of Psychiatry*. 2022; 56 (8): p. 910-948.
- [4] Goldfarb Y.S., Badalyan A.V., Gerasimenko M.Y., Shchetkin V.A., Potkhveriya M.M., Elkov A.N. Rehabilitation measures in acute poisoning of chemical etiology in a toxicological hospital - M.: "Nauka", 2023. - 307 p. [in Russ.]
- [5] Voytsekh V.F. *Clinical suicidology*. – Moscow: M, 2007. – 195 p. [in Russ.]
- [6] Litvinova O.S., Kalinovskaya M.V. Toxicological monitoring of the causes of acute poisoning of chemical etiology in the Russian Federation. *Toxicological journal*. 2017; (1): 5 - 9 p. [in Russ.]
- [7] Akalaev, R.N., Minnullin, I.P., et al. Acute poisonings of T43.0-T43.9 group medicines (antidepressants, neuroleptics, psychostimulators, and normomimetics): Manual. - «Complex Print», Tashkent, 2023, 136 p. [in Uzb.]
- [8] Akalaev R.N., Lodyagin A.N., Sharipova, V.Kh., Batotsyrenov B.V., Matlubov M.M., Shikalova I.A., et al. Acute poisonings of psychostimulators // *Herald of Emergency medicine*. 2020, Vol. 13 (3), P. 99-107. [in Uzb.]
- [9] Akalaev R.N., Shoumarov G.B., Alimov U. Kh., Akalaeva A.A., Honbabaeva R.Kh., Inomova Sh.A. The base family role in the formation of a suicide attempt in women // "Psychology of the XXI century". 2024. Samarkand. p. 28-29. [in Russ.]
- [10] <https://stat.uz/ru/ofitsialnaya-statistika/demography> (accessed 12.03.2024)
- [11] Sinenchenko A.G., Lodiagin A.N., Shilov V.V., Batotsyrenov B.V., Balabanova O.L., Shikalova I.A. Structure analysis of acute poisoning by modern psychoactive drugs // *Hygiene and Sanitation*. 2020. № 6. [in Russ]
- [12] Moller C.I., Davey C.G., Badcock P.B. et al. Correlates of suicidality in young people with depressive disorders: A systematic review. *The Australian & New Zealand Journal of Psychiatry*. 2022; 56 (8): p. 910-948.
- [13] Chekman I.S., Belenichev I.F., Gorchakova N.A., Kucherenko L.I., Doroshenko A.M., Simonov P.V., Bukhtiyarova N.V. Acute drug poisoning: diagnosis, measures of emergency therapy. Kiev, Zaporozhye, 2018. 100 p. [in Russ.]
- [14] Starshenbaum G.V. *Suicidology and crisis psychotherapy*. - Moscow: "Cogito-Center", 2018. - 376 p. [in Russ.]
- [15] Berkovits L. *Aggression. Causes, consequences and control*. SPb.: Prime-EUROZNAK, 2020, 512 p.
- [16] Shoumarov, G.B., Qodirov U.D., Soginov, N.A., paluanova Z.D. The analysis of suicides: challenges and solutions. *Methodique manual*. Tashkent, Family and neighbourhood research institution. 2020. 64 p. [in Uzb.]