Abstract. Russian full-scale invasion caused serious threats to generative activity in Ukraine. The concept of generative activity encompasses a set of actions and relationships aimed at childbearing and care about child/children, fulfilling the obligations of adults to contribute to the well-being of the younger generations through upbringing, teaching, socialization and also taking care of their safe environment. There are various strategies concerning childbearing in unsafe conditions of war in Ukraine, among them: postponing the birth of a child for better times, having a child to continue the family line, having a child after a previous postponement (due to fear of no having better chance later), having a child as a replacement for a lost child or pregnancy etc. From the beginning of the full-scale war, there was an increase in women's responsibility for the safety and upbringing of children, and an increase in the prevalence of "intensive motherhood" as generative strategy because many women lost direct support in raising and caring for children from men. The full-scale war forced many mothers to move abroad with children, others – to move with children to safer areas within Ukraine, many husbands/fathers are protecting their motherland on the frontline, some women and their children have already lost their husband/father during this war. From the start of the full-scale invasion of the Russian Federation until now, more than 1.6 thousand children in Ukraine have been left without parental care due to the death of their parents (one or both of them).

Keywords: generative activity, war, reproductive behavior, "intensive motherhood", parental care

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socialization and also take care of their safe environment. Deformations of generative activity reveal in the forms of refusal to have child/children and care about them, lack of «generative motivation». Generative activity intersects with family behaviour, but there is no complete overlap. Generative activity is closely related to reproductive behaviour. In demographic, geodemographic and sociological research the concepts of generative, reproductive, procreative and proliferative behaviour are often used as synonyms (Traykov & Tsvetkov, 2018).

However, within our work, we use the concept of "generative activity" in the expanded interpretation provided above. During the war, many additional difficulties and obstacles arose, not only in the implementation of childbearing plans in Ukraine, but also with respect to the fulfilment of parental/maternal roles, the development of responsible parenthood. Therefore, we tried to investigate not only the changes in reproductive behavior in the shock conditions of the full-scale war against Ukraine, but also to determine how these conditions affected the performance of parental functions.

The purpose of our paper is to determine the main strategies of generative activity in shock and crisis periods using the example of the period of the full-scale military invasion in Ukraine.

Literature review. Nobles J., Frankenberg E., Thomas D. “using population representative multilevel longitudinal data” could identify two behavioral fertility responses to mortality exposure after the tsunami: 1 – “mothers who lost one or more children were significantly more likely to bear additional children”; 2 – women without children “initiated family-building earlier in communities where tsunami-related mortality rates were higher” (Nobles et al., 2015). In addition, partial replacement for women after the death of own child the researchers also “find a powerful effect of mortality at the community level on subsequent fertility”. Another study using of Ghana women case indicated that “in addition to own-child mortality, neighbourhood child mortality shocks are also a determinant” of fertility because women “may desire more children as an “insurance” against future losses” (Owoo, 2014).

P.N. Mari Bhat considered hoarding effect (insurance) as an alternative to replacement. The hoarding related with expectations about future mortality. Of course, the hoarding/insurance is necessary in high child mortality societies to increase the probability that a few children can survive to adulthood. The hoarding effect can be “response to perceived mortality risk not necessarily learned from one's own experience” (Bhat, 1998). The model of effect of mortality expectations on fertility showed that the direct marginal effect “is larger than zero but less than unity” (Canning, 2013).

There are studies that examine childbearing postponement in the face of uncertainty and instability, but they mainly focus on economic uncertainty and shocks, associated with pandemics (Adsera, 2004, Kreyenfeld, 2010, Guetto, 2022).

Research methodology. The methods deductive, analytical, comparative, concrete-historical methods and method of typology were used for our study. Secondary analysis of researches data, some statistical and graphical methods were also applied.
We used some data from the State Statistics Service of Ukraine, the Ministry of Social Policy of Ukraine, the Ministry of Justice of Ukraine, the outcomes of social surveys conducted in different periods of full-scale war, in-depth interviews with women, media publications, and foreign research on related topics.

**Main results.** All strategies of reproductive behavior in Ukraine during a full-scale war can be divided into two groups: strategies of *postponing the birth of a child or refusing to give birth* and strategies of *opting for parenthood/motherhood* in these conditions.

**Postponing the birth of a child.** The most widespread strategy of childbearing behaviour (and, probably, the most researched) is postponing the birth of a child in "until better times", waiting for a more prosperous period for this important event.

The particularity of Ukraine situation is that tendency of childbearing postponement to older age, which occurs in unison with European trends and is associated with changes in the public perception of the role of women and increased opportunities for development (that is, as an evolutionary process), was accompanied by the postponement of the birth of a child under the influence of negative processes such as long political tension, economic instability, pandemic, war. Statistical data for 2013–2021 both in Ukraine and in most European countries evidence about widespread of this practice mainly among women of young reproductive age. In Ukraine during this period, childbearing activity decreased quite rapidly among women under the age of 30, decreased significantly more slowly among women aged 30–34, and changed little among women of older reproductive age (*Fig. 1*).

![Figure 1. Age-specific fertility rates in Ukraine, 2015–2021, per 1000 women in the respective age group](source)

*Source:* The State Statistics Service of Ukraine (excluding the temporarily occupied territories of the Autonomous Republic of Crimea, the city of Sevastopol data calculated excluding Donetsk and Luhansk regions).

**Refusing to give birth.** For many Ukrainian women, the war intensified the fear for the life and health of the child (even the unborn), because at any time a
rocket attack, a bomb or a mine can destroy housing and life. Under such circumstances, the refusal to give birth to a child is perceived in society with greater understanding than before. In particular, the comprehensive comparative study "How did the war change me and the country?" provided by sociological group “Rating” was aimed to show to what extent the views, assessments, and life of Ukrainians have changed in various spheres during the year of the full-scale russian invasion of Ukraine. Results of this study demonstrated that the level of tolerance in society has increased during the war: the positive-neutral attitude towards people who do not want to have children (childfree) it has increased from 57% to 67%. Interestingly, among young people under the age of 35, the level of tolerance was the highest and reached 84% (Comprehensive comparative study, 2023). Under circumstances when behaviour is socially approved, its spread is accelerated.

Refusal can occur during the planning period for the birth of a child, when a married couple becomes a supporter of the idea that a world where wars constantly break out and international organizations are powerless to stop them, where an aggressor country can seize foreign territories, kill peaceful citizens, destroy residential buildings and destroy the infrastructure, you cannot "bring in" a new person and expose him to danger. Under the influence of destructive factors, it is possible to increase the deformation of generativity, which is manifested in a conscious and voluntary decision not to have children and to avoid any interactions with them. In this case, it is not necessary to look for the causes of this phenomenon in the parents' generation, as insisted by E. Erikson (Erikson, 2006), but it is necessary to study the mechanisms of formation of deformations of reproductive behaviour during periods of shock and to develop countermeasures.

Refusal to give birth to a child can occur already during pregnancy, especially in the early stages. In Ukraine in 2022, according to the Ministry of Health, the total number of abortions decreased, but the frequency of abortions per 100 pregnancies compared to the previous year increased from 17.6 to 18.7 (the frequency of abortions per 100 births increased from 21.3 to 23.0).

Rejection of an already born child is also possible. The report on medical care for pregnant women, and women in labour shows that during the year of the full-scale russian invasion, the number of newborns who were abandoned by their parents was 223 children. This indicator is significantly lower than the one in 2021 (337 children), but this is unlikely to be related to behavioural changes, rather, such situation appeared due to the under-recording of these cases (in particular, the lack of information on the Kherson and Luhansk regions, a large part of which remains occupied) (Informational and statistical bulletin, 2023). Of course, the refusal of a born child is possible in different periods (including relatively prosperous ones), this phenomenon is not unique or inherent only to war, but the entirety of such cases shows that this strategy is resorted to during war as well.

**Opting for parenthood in adverse times.** During times of war, not only strategies aimed at avoiding conception and childbirth in dangerous conditions emerge, but also opposite strategies. In some cases, war can accelerate the decision to have a child. This is evident in families of defenders of our Motherland and is accompanied by anxiety: if the husband is killed, the woman will be left alone with no continuation of the family line. We refer to this strategy as "having a child to continue
the family line," and we examine it in the context of responsibility for procreation including for the life and health of a child. Women report such reproductive plans (this motivation) in interviews, but unfortunately, it is impossible to assess the prevalence of this strategy.

After the start of the large-scale invasion, several medical clinics have offered free cryopreservation (freezing sperm at extremely low temperatures) to servicemen and women who join the military (Kondrat, 2023).

Women/couples especially of older reproductive age groups might feel the fear of losing the opportunity to have a child. They realize that as they age, the chances of conceiving and having a healthy child gradually decrease, and postponing childbirth to "better times" (after war) is not a wise step. However, in such cases, they also consider their ability to provide for the child financially throughout their upbringing and during the period when the parents will still be working. It is also taken into account that excessive age differences between generations of children and parents complicate interpersonal understanding and increase the likelihood of conflicts. We have designated this particular reproductive choice as stemming from apprehension of losing opportunity to have a child in the future.

There are many couples in Ukraine, who have been postponing having a child for the extended period. Initially, economic instability was the primary factor, followed military and political tensions, then because of Covid-19 and the full-scale military invasion of RF. In view of this, some families have stopped postponing pregnancy and childbirth, realizing that even after the war ends, security problems might not be completely resolved, economic instability may continue for a long time, so the ideal moment for implementing of childbearing plans “may no longer be in the cards”. This reproductive strategy of "having a child after a previous postponement (due to fear of not having a better chance later)" is associated with a specific "fatigue of waiting for better times". For women of middle or older reproductive age, it may be combined with an apprehension of losing opportunity to have a child in the future.

The fact that in some western regions of Ukraine (perceived to be safer in terms of military risks), the decline in births was on par with the average annual decline rate in the period before the full-scale invasion suggests that reproductive plans in these regions are not being revised.

In total, according to the Ministry of Justice of Ukraine, 206,032 children were born in the government-controlled areas in 2022, which is 25% less than in 2021 and 93,491 children were born in the first half of 2023, which is 9% less than for the same period 2022.

Revision of reproductive plans in the direction of increasing the number of children in the family may also occur as a result of awareness of the value of human life in general and the value of children in particular. Under such conditions, material values become smaller, a person's perception of the world and the meaning of life changes.

As of August 20, at least 503 children in Ukraine have died as a result of the full-scale armed aggression of the Russian Federation and more than 1,115 were injured of various degrees of severity (Izvoschikova, 2023). However, the Office of the Prosecutor General of Ukraine warns that these data are not final and there is a
high probability of undercounting due to the fact that parts of the country’s territories are occupied.

Therefore, in the conditions of war, the childbearing can also have the effect of replacement of dead children, and in cases of spontaneous termination of pregnancy – replacing an unborn child. Note that the share of spontaneous abortions (the loss of pregnancy naturally before twenty weeks of gestation) in total number of abortions in 2022 remained at the same level as in the previous year (2021), but compared to 2019 (that is, the year before the pandemic) it increased significantly (from 14.5% to almost 19%).

However, in a number of cases, the opposite effect can also be observed: people who have experienced tragic events may have a growing fear of losing a child/another (unborn) child, fear going through this pain. General despair and fear of risks appear, and then the previously described generative strategy of refusing to have a child reveals.

Currently, we do not consider the possibility of having a child as insurance against losses (in other words, creating “reserve”), but if the war continues for a long time or the rocket attacks continue, we should not reject such scenario of childbearing behaviour changes, especially in one-child families.

**Responsibility for children and their care in wartime upheavals.** The war changed the strategies of generative activity regarding the care of children, their safety and teaching. Notably, in wartime conditions in Ukraine, women are more often responsible for children, work and home at the same time. Unfortunately, many women have lost direct support in raising and caring for children from men, because many husbands/fathers are defending our Motherland on the frontline, some woman and their children have already lost their husband/father during this war.

Thus, there has been an increase in women’s responsibility for the safety and upbringing of children and increase in the prevalence of "intensive motherhood" as a generative strategy. The phenomenon of intensive motherhood represents a modified manifestation of responsible motherhood, serving as a substitute and compensatory mechanism for the functioning of this institution in conditions characterized by unsatisfactory socio-economic or hazardous environments.

Among the strategies of women’s generative activity related to maintaining and raising children in the period of war there is moving with children to safe regions. Moreover, some families seek to protect themselves and their children as much as possible and go abroad, while others move to regions within Ukraine, where the threat would be felt as little as possible. According to the Ministry of Social Policy of Ukraine, as of September 2023, there were 4,893,700 registered internally displaced persons (IDPs), of which 21.6% are children under 18 years of age (Ministry of Social Policy). At the end of July 2023, more than 4.1 million non-EU citizens, who fled Ukraine as a consequence of the Russian invasion, had temporary protection status in EU countries. The main EU countries hosting beneficiaries of temporary protection from Ukraine were Germany (1.15 million people), Poland (0.97 million) and Czechia (357 thousand) (Temporary protection for persons fleeing Ukraine, 2023).

Among the refugees, several groups can be distinguished: 1) who were evacuated from war zones, 2) those whose homes were destroyed, 3) who feel fear for
their lives and the lives of their children in conditions of life and health risks. It is noteworthy that initially the goal of the overwhelming number of migrations was the desire for security, but over time, already in security conditions, the search for a more acceptable place or host country began. Thus, two waves of surveys conducted by the research agency Info Sapiens in November–December 2022 and April–May 2023 clarified changes in the distribution of Ukrainian refugees by host country, in particular, a decrease in their share in Poland and, instead, an increase in Germany (Refugees from Ukraine, 2023). This trend was confirmed by study conducted by the EWL Migration Platform also (From Poland to Germany, 2023). The study showed that material factors play important role in the migration of Ukrainian refugees from Poland to Germany where is more attractive social benefits, higher wages and better opportunities to save. Changes in the host country are also facilitated by recommendations from friends, relatives and acquaintances who have already settled in Germany. Refugees have the opportunity to get better chances for professional and personal development.

We have also the strategy of "ignoring threats", it does not always indicate irresponsibility, but is more complex phenomenon that has not been sufficiently studied yet.

In regions where is no so heavy level of missile threat, in order to protect the child – if the school does not have its own shelter – practice of complete transition to online education or combination of face-to-face and online education is widespread. In order to increase the safety of children, visits to out-of-school sections/groups have been temporarily canceled (with the exception of those where it is possible to quickly move to a shelter).

During the upheavals of the war, the strategy of "collective responsibility for children" became widespread. This strategy especially pertains to situations where children have encountered adversity, including exposure to shelling, occupation, or the loss of their parents. An example of collective responsibility for children can be the woman from "Azovstal" with the nickname "Aunt Soup", who saved children from hunger in the shelter and tried to entertain them (Tarasov, 2022), as well as families who adopted children whose parents died; women who took their and other children out of dangerous areas under fire in bullet-riddled cars, those who prepared food and took them to newly liberated areas where electricity, water and gas had not yet been restored so that people could eat hot meals, etc.

It should noted, that from the start of the full-scale invasion of the Russian Federation until now, more than 1,600 children in Ukraine have been left without parental care due to the death of their parents (one or both of them).

**Conclusion.** The paper highlights the main strategies of generative activity during the full-scale war in Ukraine, in particular, behavior regarding childbearing and upbringing of kids, fulfilling the obligations to contribute to the well-being of children and taking care for their safety. Currently, statistical information that appears in the public space, in-depth interviews with women, publications in the mass media, foreign studies on related topics, the nature of answers in sociological surveys testify to the presence of all the strategies of generative activity in Ukraine, that indicated in this article. However, it is impossible to form the hierarchy of these strategies or indicate the share of women, who chooses a particular strategy without
conducting special sample survey. The most threatening for the post-war demographic development is the strategy of refusing to have a child / another child (or the refusing plans to give birth to a child), which also can be considered as a deformation of generative activity. The possible spread of this strategy will inevitably deepen the demographic crisis in Ukraine.

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