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Family structures, trends and prospects in the East-Kazakhstan region

Dissertation thesis

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DISSERTATION THESIS

Prague 2011 **Mgr. Dinara Ualkenova**

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Family structures, trends and prospects in the East-Kazakhstan region

Abstract

This study addresses modern types of families in the East-Kazakhstan region and their role in the development of population. Using a sample of East-Kazakhstani women interviewed in 2008 in the "Family Transformation survey," this study focuses on continuously married women and women who have been previously married. The purpose of this thesis is analysis of factors influential on the intention to be divorced. Additionally, this thesis investigates issue: how a woman's family life-course (marital status and number of children born in the first marriage) influences the risk of a post-dissolution birth among divorced women. Also this study attempts to analyze how the experience of a marital dissolution affects a woman's cumulated fertility. The results show that women who underwent a marital dissolution have lower fertility than those who remained continuously married, and that repartnering enables this group of women to recapture the fertility lost with the dissolution of the first marriage. With a rise in divorce rates and existing differences of post-dissolution marital behaviors for those who have been previously married, it has become important to account for the type of dissolution (widowhood or divorce) of a union when analyzing partnership formation after the breakdown of a union. Additionally, this study seeks to contribute to understanding of repartnering among women in the East-Kazakhstan region by examining the impact of a woman's number of previous children and relationship histories on the intention of being repartnered.

Keywords: traditional and modern family, family dissolution, divorce, repartnering, post-dissolution childbearing, East-Kazakhstan region.

Абстракт

Данное исследование нацелено на изучение современных видов семей а также их роли в развитии населения в Восточно-Казахстанском регионе на основе результатов социологического исследования «Анализ развития семьи», проведенного в 2008 году. Данное исследование главным образом фокусируется на непрерывно замужних, разведенных и вдовых женщинах фертильного возраста. Целью данной работы является анализ факторов, влияющих на риск роста разводов среди женщин Восточно-Казахстанской области. Кроме того, исследование нацелено на изучение семейно-брачных отношений женщин (семейное положение и количество детей, рожденные в первом браке) и других факторов влияющих на вероятность родить ребенка после распада первого брака. Также в данном исследовании предпринимается попытка проанализировать влияние разводов на количество детей рожденных женщиной. Результаты показывают, что разведенные женщины имеют более низкую рождаемость, по сравнению с женщинами находящимися непрерывно в браке. Кроме того, последующее замужество или сожительство позволяют разведенным женщинам восстановить количество детей не рожденных в связи с рассторжением первого брака. С ростом количества разводов а также существующих различий в брачном поведении после распада первого брака нарастает необходимость в изучении предпосылок распада семьи (вдовство или развод) при анализе вероятности возникновения новых видов партнерства (замужество или сожительство) после распада первого брака. Кроме того, данное исследование призвано внести свой вклад в изучение вероятности замужества и сожительства после распада первого брака среди женщин фертильного возраста в Восточно-Казахстанском регионе путем изучения влияния количества детей рожденных в первом браке и других социально-экономических и демографических факторов.

Ключевые слова: традиционные и современные семьи, распад семьи, разводимость, рождение детей после распада первого брака, Восточно-Казахстанская область

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Chapter 1

Introduction

1.1 Problem specification and relevance of research

A key concept in the social science, and especially in demography, is that of the family (R. Jallinoja and E. Widmer 2000). The family is generally regarded as a major social institution and a locus of much of a person's social activity. It is generally assumed nowadays that the modern family has undergone significant transformations in its structure. Industrialization, complexity of production procedures, urbanization and many other factors led to the growth of the population mobility, rise of personal freedom, emancipation of women, the separation of children from parents in connection with increasing number of divorce and more complicated socialization. The societal changes have contributed to a sharp reduction in the percentage of classical traditional families, principally nuclear families. Replacing these, new forms of families emerged such as: childless families, one-parent families, blended and stepfamilies and quasi-family units based on non-marital cohabitation (E. Macklin and R. Rubin 1983, R. Jallinoja and E. Widmer 2000). The concept of family has changed from the large extended family to smaller units, the nuclear family, and nowadays to even smaller single-parent families. Family was earlier seen as an institution, but nowadays, the family is based on the intimate relationship between two adults. If the relationship is not working, the family will probably be broken (R. Jallinoja and E. Widmer 2000). Since the numbers of separations and divorces began to climb, these trends could have the implications on individuals' fertility. As significant numbers of women and men spend a part of their lives in a "post-dissolution" state, important questions arise about their reproductive behavior (S. Meggiolaro and F. Ongaro 2010). A marital dissolution interrupts the period, which began with marriage, when a woman is at risk of conception, and thus lowers the chances that she will achieve the expected family size. As a consequence, marital instability may, theoretically, be considered as depressing factor for fertility (S. Meggiolaro and F. Ongaro 2010). Accordingly, the changes in family structures, marital-conjugal relationships and marital behavior could lead to changes in a woman's fertility behavior.

Moreover, from the middle of the 20th century significant and irreversible shifts in the Kazakhstani

family institute took place, which are considered by many researchers as the crisis of the traditional family (S. Ualieva 2007). One can observe a renunciation of marriage as a lifetime commitment, rising of divorce rates and marriage dissolution, a renunciation of stereotypes in upbringing of children, the increase in the number of one-parent families and families with stepparents, and the wide-spread increase in abortions and extramarital births. All factors listed above underpin the urgency of this research and define whether the given changes are the crisis of family as a social institute (with negative impact on the fertility level), or definite forms of the organization of family life only (non-influential on the fertility level). The reason for consideration of this study on the East-Kazakhstan region must be explained. Kazakhstan is multiethnic, multicultural country with the high level of heterogeneity. Historically, South and West parts of Kazakhstan are different from Central, North and East regions. In order to achieve sufficient level of homogeneity the study will consider the East-Kazakhstan region.

Conclusively, in this study, modern families – their structure, the historical conditions of their origin, modern trends and patterns in divorce, remarriage and repartnering and the role of family dissolution process in population development in the East-Kazakhstan region will be analyzed.

1.2 Research goals and objectives

Aforementioned, the modern trends in family diversification have an impact on current demographic situation in the East-Kazakhstan region. Consequently, one of the main goals of this thesis is to study the trends in modern families and provide an assessment of perspectives of their further development.

Therefore, the aim of the thesis is to provide an investigation into modern family types and their contribution to population development in the East-Kazakhstan region through an analysis of their structure, size, conditions and factors of origin.

To achieve this goal the following objectives will be investigated:

- Determine the characteristics of a family diversification process, identify definitions of the lone-parent family, stepfamily, conjugal union, and analyze the theoretical framework of the transition process from the traditional family to a modern one;
- Investigate factors influential on the modern families occurrence and analyze a woman's characteristics and peculiarities in family formation, dissolution and reproductive behavior through comparative analysis of survey results by marital status, place of residence and nationality;
- Study existing conditions of family dissolution, particularly divorce among women in the East-Kazakhstan region, and modeling explanatory factors which are influential on divorce;
- Analyze an impact of marital instability (divorce) to a woman's fertility level by modeling predictors of post-dissolution childbearing and also modeling factors which are influential on a woman's cumulative number of children;
- Analyze the factors which lead to the likelihood of building a new family after experiencing divorce or widowhood among women in the East-Kazakhstan region through modeling the predictors of post-dissolution remarriage and repartnering.

Conclusively, the object of this study is primarily modern types of families (lone-parent, stepfamilies, and blended families) in the East-Kazakhstan region. The subject of this study is the demographic analysis of divorce and widowhood, a post-dissolution childbearing, repartnering and remarriage, and also factors behind them in the East-Kazakhstan region.

1.3 Outline of study

This thesis consists of five chapters, an introduction and conclusion. Aforementioned, the main goal of the study is analysis of existed modern family forms and factors of their origin. Three specific issues will be examined: family dissolution process, the impact of this process on a woman's fertility level and a woman's post-dissolution marital behavior. The chapters were formed by principle aimed at achieving this goal and studying abovementioned issues.

In the first chapter, named "Theoretical framework" the overview of literature, basic theories related to the family transformation process and characteristics, definitions of modern family types and households is included. In this chapter a reader can find mostly theoretical and methodological information concerning family definitions, the concept of family diversity, the transition from a traditional family to a modern one in Kazakhstani history and reality, and the methods which were used in this study. Additionally, the chronological evolution of households' classification and the evolution of definition showing how the process of family diversification and transformation from a traditional extended family to a modern one occurred were examined. The chapter includes an analysis of household typology according to the international practice, and also the process of shifting from the "family concept" to the "household concept" in the Soviet and Kazakhstani censuses. The main contention of this chapter is that analysis of changing family patterns which are distorted by the definition of the family that is generally used. More importantly, from the perspective of the dynamics of family changes, the analysis of changing family structure using the only demographic approach may overstate the fluidity and demise of the nuclear family form. Accordingly, the analysis of changes in the family as a social unit should not be held hostage to a definition and measurement approach that may not adequately reflect its true character.

The second chapter addresses the descriptive analysis of the survey results. This chapter contains the description of survey design, sample size determination, the results of ANOVA test and descriptive analysis of respondents. This part of thesis related to the survey design aimed to provide information regarding the survey and the questions which were included into the survey. Additionally, this part of study aimed to describe the representativeness of sample and to ensure that the sample has an adequate representation of real population in the East-Kazakhstan region. The description of respondents also was included to this chapter. This part was aimed to distinguish groups of respondents for the comparative analysis according to their main characteristics. The ANOVA test aimed to show the significant differences among groups of respondents, stratified according to the sample design. Additionally, this part was aimed to prepare data for the comparative analysis of survey results according to the respondents' main characteristics.

The third chapter aimed to concurrently analyze women's characteristics, such as: attitudes towards family, religion, family formation and dissolution and fertility according to their age, nationality and marital status. The comparative analysis is based on the description of survey results. Moreover, this chapter aimed to distinguish main respondents' characteristics which will be useful in the following modeling of family dissolution process, a woman's post-dissolution fertility and marital behaviors. Accordingly, the comparative analysis aimed to highlight the most important respondents' characteristics for the further analysis of trends, related to the diversification of family types in the East-Kazakhstan region.

The fourth chapter discusses the patterns and trends in family dissolution process, particularly in divorce. This part of the study based on survival analysis of divorce in the East-Kazakhstan region. Two main issues will be under the consideration: the determinants of divorce among ever married women, specifically, the role of life course factors connected with the experience of divorce and modeling of these factors. Accordingly, the chapter aimed to highlight the main risk factors of divorce among women in the East-Kazakhstan region.

The next chapter set out to analyze the impact of family dissolution on a woman's fertility level. The chapter aimed to discuss the main factors which are influential on a woman's likelihood of experiencing a post-dissolution childbearing among divorced women. The second issue which must be highlighted is analysis of woman's overall effect of union dissolution on a woman's cumulated fertility by comparing the continuously married women and women who interrupted their first marriage.

The last chapter aimed to analyze a woman's post-dissolution marital behavior. This chapter discusses the factors which lead to the likelihood of building a new family after experiencing divorce or widowhood among women in the East-Kazakhstan region. The first part of this chapter related to the analysis of factors which are influential on the women's risk to be remarried. The second part aims to analyze the factors of forming a new conjugal union after experiencing of divorce or widowhood.

Chapter 2

Theoretical framework

2.1 Overview of literature

The problem of diversification of family types is not new in demographic literature. A big amount of research contains the theme of the transformation of family and family relations, for example: H. Gross and M. Sussman (1982) “Alternatives to traditional family living”; R. Hill (1986) “Life cycle stages for types of single parent families: of family development theory”; R. Bruynooghe (1986) “One-parent families in the context of variations in parenthood: between deviance and commitment”; E. Macklin (1980) “Nontraditional family forms a decade of research”, E. Macklin and R. Rubin (1983) “Contemporary families and alternative lifestyles”; J. Trost (1980) “The concept of one-parent family”; L. Wu and E. Thomson (2001) “Race differences in family experience and early sexual initiation: dynamic models of family structure and family change”; J. Kelly (2009) “Challenges to the traditional nuclear family” etc. All of them showed the evolution of families, family relationships and factors behind the changes in family structures, such as: increasing in divorce rates, and the acceptance of cohabitation in society. Also they discussed the changing dynamics of the family, the decline of the traditional nuclear family and its causes. For instance, S. Saggers and M. Sims (2004) in their paper named “Diversity beyond the nuclear family” attempt to theorize family diversity. Moreover, they analyzed the declining rates of marriage and fertility, rising divorce rates and other social trends which mean that fewer people in the future will live in the ideal family norm, such as: the nuclear family. Previous researchers (E. Macklin 1980, J. Trost 1980) came to a conclusion that new types of families should be considered as the deviation from the traditional nuclear family, and the process of diversification was considered as the crisis of traditional family. Controversially, more resent researchers highlighted that the family has always been an evolving and dynamic unit, and the rise of alternative forms of partnership, need not be seen as a challenge to the idealized institution of the nuclear family. However, all of them highlighted the need to understand the sources of family diversity, and the impact of diversity on family members themselves. Accordingly, the aforementioned researchers concluded that in demographic literature there is a big

amount of misunderstanding in the explanation of some types of families, particularly related to the definitions of modern types of families. However, the clear definitions and boundaries between new forms of families are still absent.

Several research papers include studies related to households in general and household typology. Such as: L. Hall, A. Walker, and A. Acock (1995) "Gender and family work in one-parent households", J. Rychtaříková and A. Akkerman (2003) "Trajectories of fertility and household composition in the demographic profile of the Czech Republic", M. Pilon (2006) "Household and family demography", N. Keilman "Households and families" (2006).

It is essential that the description of family types, including one-parent families, blended and stepfamilies is under consideration not only by demographers, but also by sociologists. There is a large variety of literature related to studies on the definitions of the single-parent concept. A more detailed description of this research is introduced in the next subchapter, which is called "The definition of family concept". Additionally, a few studies which contain the definitions of single-parent families should be mentioned. For example: P. Stein (1978) "The lifestyles and life chances of the never-married"; F. Kamarás (1986) "One-parent families in Hungary"; J. Trost (1986) "One-parent families after cohabitation"; M. Masui (1986) "Becoming an unmarried mother: a decision process". All of them discussed the concept of one-parent families and the broader character of definitions. Also they attempt to distinguish "sources" of one-parent families' appearance, such as: a variability of life circumstances, complication of family relationships, and living arrangements, and also the changes related to society. Moreover, some research discusses the problems in defining and quantifying the number of stepfamilies, the complexities inherent in the contemporary stepfamily, and the key differences between stepfamilies and nuclear families. Some ideas for change and early intervention strategies are outlined and resources for stepfamilies are highlighted. For instance, M. Howden (2007) "Stepfamilies: understanding and responding effectively"; L. Bumpass, K. Raley, J. Sweet (1994) "The changing character of stepfamilies: implication of cohabitation and nonmarital childbearing" analyzed stepfamilies through a transition period where the new family members (mostly divorced, separated and widowed partners) try to become a family unit. Also they concluded that the whole process of becoming a stepfamily comes with many challenges. Additionally, author A. Koerner (2003) in his paper "Stepfamilies and system theory: how communication can overcome challenges" along with the analysis of challenges that many stepfamilies encounter, the application of system theory and also stepfamily communication patterns analyzed. The lack of demographic knowledge about the family which for a long period has been grounded in quantitative data and analysis was discussed by P. Smock and W. Manning (2001). They argued that to fully understand the family and particularly new family forms, it is important to include qualitative approaches as well. Moreover, they introduced a conceptualization, which implies that qualitative, as well as quantitative, research methods are necessary for understanding family forms. Additionally, they discussed possible barriers to fully endorsing qualitative methods by demographers studying the new family forms. However, the possible solutions in order to avoid these barriers were not clearly highlighted. The definition of cohabitation is also under the consideration of numerous researchers (J. Teiller, N. Reichman 2001, D. Fein et all 2003, D. Kerr, M. Moyser, and R. Beaujot 2006, J. Knab

2005). All of them focused more attention on unwed parents, their living arrangements, and relationships, and also concluded that cohabitation is an ambiguous concept that is difficult to measure. Additionally, they highlighted how sensitive cohabitation estimates can be according to various sources of information. They also presented various estimates of cohabitation using different sources of information and highlighted difficulties in measuring cohabitation precisely. For example, J. Teiller and N. Reichman (2001) in their study named "Cohabitation: an elusive concept" considered on the distribution of couples and their variability by race, ethnicity, age, nativity, reliance on public assistance, educational achievement, and health insurance status. Accordingly, they concluded that in the process of cohabitation analysis limitations of using binary measures of cohabitation to characterize parent relationships could occur. Another authors, for instance D. Fein et all (2003) in their paper "The determinants of marriage and cohabitation among disadvantaged Americans: research findings and needs" highlighted that cohabitation clearly is the more ambiguous concept, as perceptions of whether a couple is "living together" may depend on the night of the week and each partner's interpretation of the relationship. And also they added that surveys are typically fairly consistent in leaving it to respondents to decide whether or not they are living together. The same problem was highlighted by J. Knab (2005) in study "Cohabitation: sharpening a fuzzy concept". He attempts to examine the degree of correspondence between measures of cohabitation, and introduced the prevalence of "part-time" cohabitation. However, it should be mentioned, that a clear classification of cohabited partners is still absent, and the problem of distinguishing "part-time" cohabitation from other types of "living together" still depends on every single propose of study. Another important issue, related to demographic and socio-economic characteristics of cohabited persons, was mentioned by D. Kerr, M. Moyser, and R. Beaujot (2006). However, although they mentioned demographic characteristics, the study only considered socioeconomic characteristics (education, labor force participation, median income, income poverty and homeownership), and the main conclusion was that cohabitation has become far more widespread. Additionally, P. Smock, and W. Manning (2004) in their study named "Living together unmarried in the United States: Demographic perspectives and implications for family policy" focused on cohabitation in the context of recent demographic trends in union formation and dissolution. However, the major part of the study was related to the consideration of the implications of cohabitation for child wellbeing, focusing on social class, race and ethnicity and discussion how and why unmarried cohabitation is implicated in recent dialogues about family policy. It is essential that the majority of these studies review the formation, stability, and quality of co-residential unions (marriage and cohabitation) between men and women. Additionally, definitions of marriage and cohabitation are relatively consistent across studies, with marriage indicating a clear legal status and cohabitation indicating co-residence without marriage. But, at the same time, the definitions and classifications of cohabitation are different according to different studies. Another problem is that the analysis of demographic factors, which could lead to an increase in cohabitation and other types of modern families, is minimal in these studies. Additionally, a more attention was paid to concepts, definitions, socio-economic and ethnic characteristics.

An analysis of demographic factors along with socio-economic characteristics in the definition of one-parent families, stepfamilies and cohabited partners was provided by L. Bumpass, K. Raley, J. Sweet

(1994) in their study "The changing character of stepfamilies: implication of cohabitation and non-marital childbearing". Accordingly, they analyzed how divorce, non-marital childbearing, and cohabitation are reshaping family experience and changing traditional definitions of "families". Also they argued that the definition of stepfamilies must be expanded to include cohabitations which involve a child of only one partner, and explicitly recognize that stepfamilies include those formed after non-marital childbearing as well as after separation or divorce. They also noted how a significant proportion of officially defined single-parent families are two-parent cohabiting families. Moreover, authors highlighted that over the last two decades, cohabitation has grown from rare and deviant behavior to the majority and mostly experienced by cohorts of marriageable age. Additionally, the current marriage and remarriage rates decline was explained by the increasing level of cohabitation.

The issue of premarital cohabitation and how it affects the likelihood of divorce in a subsequent marriage was investigated by J. Brudel, A. Diekmann and H. Engelhardt (1999) in paper "Premarital cohabitation and marital stability in West Germany". Also they introduced the well-known "trial marriage" hypothesis which postulates that cohabitation should decrease the divorce rate because high-risk partners will separate before marrying. On the base of data from the West German Family Survey from 1988 authors tested this hypothesis. Conclusively, they concluded that cohabitation decreases the risk of divorce. The cross-national research perspective on divorce risks within a single country (Belgium) was under the consideration of D. Mortelmans, L. Snoeckx, and J. Dronkers (2009) in study "Cross-regional divorce risks in Belgium: culture or legislative system". They analyzed important explanatory conditions for divorce risks on the macro level. Additionally, an analysis of the risk factors for marriage dissolution in Spain was given by F. Bernardi and J. Martinez-Pastor (2011) in paper "Divorce risk factors and their variations over time in Spain". The authors analyzed the transition from first marriage to marital dissolution for couples who married in two eras: the period with many social and legal barriers to marriage dissolution; and the period after the law went into effect, when there were far fewer barriers to marriage dissolution. They also used a continuous time event history analysis. The authors stressed the positive relationship between the typical features of unconventional families and marital dissolution. They also highlighted that there are certain differences between couples under the risk of divorce, according to the fact of premarital pregnancy and the number of children born in marriage. The authors also mentioned the declining importance of socioeconomic variables, such as level of education and the labor force participation of women.

The relationship between changing living arrangements, especially the decline of marriage and the overall level of fertility were also under the consideration of T. Sobotka and L. Toulemon (2008) in their article "Changing family and partnership behavior: common trends and persistent diversity across Europe". The decline of marriage and current low fertility level in many European countries were considered as a part of the second demographic transition. They argued that in the majority of countries, marriage rates and fertility declined simultaneously. However, they mentioned that the aggregate relationship between marriage and fertility indices has moved from negative (fewer marriages imply fewer births) to positive (fewer marriages imply more births). Another article "Overview chapter 6: The diverse faces of the Second Demographic transition in Europe", introduced by T. Sobotka (2008) also

included current changes in family as one of the characteristics of the second demographic transition. However, the changes in family types considered as additional to fertility patterns, moreover, the importance of fertility patterns compared to family diversification was highlighted.

The issue related to the impact of marital instability on fertility behavior is a crucial theme in demographic literature: the diffusion of marital instability could be an additional factor in the reduction of fertility levels. The effect of union dissolution on fertility, considering the factors at stake was analyzed by several authors. For instance, the consideration the marital instability as a lowering factor on women's fertility was mentioned by several researchers (R. Lesthaeghe and G. Moors 1996, F. Billari 2004, T. Leone and A. Hinde 2007). A more detailed analysis of this problem was introduced by S. Meggiolaro and F. Ongaro (2010) in article: "The implications of marital instability for a woman's fertility: empirical evidence from Italy". The authors studied a woman's likelihood of having a child after marital dissolution. They attempted to analyze the impact of some life-course factors connected with the experience of separation, a woman's status at marital dissolution (age and the number of children) and union career following marital dissolution to the likelihood of delivering a post-dissolution child. Additionally they investigated other issues, related to the influence of a woman's family life-course (union status and parity, ages of children born in the first marriage) on the risk of a post-dissolution birth among separated women, and also the effect of experience of a marital disruption on a woman's cumulated fertility. Accordingly, they highlighted that not only remarriage, but also cohabitation, are strongly associated with the likelihood of post-dissolution childbearing. Additionally, they found that women who underwent a marital dissolution have lower fertility than those who remained continuously married, and that repartnering enables this group of women to recapture some of the fertility lost with the dissolution of the first marriage. The negative impact of factors, such as: later marriage, having a very large spousal age gap, being separated or divorced, and being remarried to a woman's fertility was highlighted by K. Liaw, J. Lin, and C. Liu (2009) in their study "Reproductive contribution of Taiwan's foreign wives from the top five source countries".

The processes of repartnering and remarriage have become increasingly important in recent years as a result of a rise in divorce rates coupled with an increase in rates of cohabitation. Moreover, these union types have demonstrated to be more unstable than marriage. It is essential, that although a large body of literature exists on the study of remarriage (C. McNamee, R. Raley 2011, R. Lampard, K. Peggs 1999, Z. Wu and C. Schimmele 2005) there is far less research which has investigated repartnering in the form of a cohabiting union (R. Parker 1999, A. Skew, A. Evans and E. Gray 2009). All of them attempt to examine factors which are influential on men and women in their decision to remain single or to repartner and remarry. However, the differences between these analyses are observed. For instance, R. Lampard and K. Peggs (1999) in their study "Repartnering: the relevance of parenthood and gender to cohabitation and remarriage among the formerly married" were more interested in effect of a woman's number of children on the likelihood of being repartnered. They mentioned that the presence of children can work against repartnering in a variety of ways, while among formerly married women without children, the desire to become a parent encourages repartnering. The authors concluded that parenthood should be a key consideration in analyses of repartnering. The gender differences in the intention to be repartnered

were highlighted by R. Parker (1999) in his study "Repartnering following relationship breakdown". The issue of race, ethnic, nativity differentials for remarriage and repartnership among women were examined by C. McNamee and R. Raley (2011) in their article "A note on race, ethnicity and nativity differentials in remarriage in the United States". Additionally, the impact of previous relationship histories on the process of repartnering was examined by A. Skew, A. Evans and E. Gray (2009) in paper named "Factors affecting repartnering in Australia and the UK". They concluded that the intention to be repartnered could vary between divorced, widowed, or separated women.

The Kazakhstani research and the Soviet and Russian studies related to the issue discussed in this study are not so rich. However, the information in some extend related to the purpose of this study is considered in the following literature: N. Masanov (1995) "Kochevaya civilizacia Kazahov", S. Asfendiarov (1993) "Istoria Kazakhstana s drevneishih vremen", S. Ualieva (1995) "Structura gorodskoi i selskoi semi Kazakhstana (po materialam Vsesouznoi perepisi 1925 goda): etno-demograficheski aspect", S. Ualieva (2003a) "Tendencii semeino-brachnyh otnoshenii naselenia Kazakhstana. Istoriko-demograficheskii aspect", S. Ualieva (2003b) "Istoriko-demograficheskii aspect razvodimosti v Kazakhstane (po materialam perepisi 1926 goda)", S. Ualieva (2004) "Semeinoe sostoianie i zaniatost naselenia Kazakhstana", S. Ualieva (2007) "Osnovnye tendencii brachnosti i razvodov v Kazakhstane ", K. Kalieva (2009) "Perepisi naselenia kak istoricheskii istochnik dlya izuchenia narodonaselenia Kazakhstana 1897–1926", A. Alekseenko (2001) "Pervaya perepis naselenia v suverennom Kazakhstane: nekotorie itogi i ocenki", A. Alekseenko (2002) "Naselenie Kazakhstana v 1926-1939". The big part of Soviet and Russian research also includes partially the information about Kazakhstan's family typology. For example, A. Barashova (1998) "Genezis nepolnyh semei Respubliki Saha", E. Ivanova, A. Miheeva (1999) "Vnebrachnoe materinstvo v Rossii", A. Volkov (1999, 1996) "Evolucia rossiiskoi semi v 20 veke", "Changes in the population family structure of Russia", V. Achkarian (1975) "Socialno-pravovaya priroda posobia na detei maloobespechennym semiam". All of them highlighted that over the course of one hundred years it is unsurprising and somewhat expected that any society will experience change. The twentieth century for Kazakhstan is one perhaps more defined by change than any other. Change has infiltrated every area of society: from religion to family, technology and communications, education and politics. This researches set out to discuss the changing dynamics of the family and family types in Kazakhstan. Unfortunately, the demographic literature, related to an analysis of divorce, remarriage and cohabitation after the dissolution of first marriage, and post-dissolution childbearing in the East-Kazakhstan region does not exist. The attempt to analyze the family types in historical past of East-Kazakhstan region was done by S. Ualieva (2003a, 2003b). However, these articles are more historical than demographic. Another author's article, related to the processes of marriage and divorce in Kazakhstan based on the statistical data and 1999 census results. The author provides information regarding the marital structure of population, percentages of marriages according to marital status and age, the crude divorce and marriage rates, and the percentages of extra-marital fertility. Additionally, the author highlighted the importance of analysis of these trends according to regional and national differences. Accordingly, author concluded that the current situation in Kazakhstani family structures is dramatically changed. Moreover, S. Ualieva (2007) mentioned factors which lead to these

changes: the increase in mean age at first marriage along with the percentage of singles, and the increase in divorce rates. However, it should be mentioned that the descriptive results, received by author did not give any opportunity to analyze the additional factors behind these processes. The reproductive behavior of East-Kazakhstani women was under the consideration of A. Alekseenko, Z. Aitkazina, N. Krasnobaeva, E. Tarasova, S. Ualieva, and A. Serekpaeva (2006). They concluded that a woman's fertility behavior in the East-Kazakhstan region depends on such factors as: nationality, place of residence, age, and the social living conditions. The impact of a woman's marital status on the fertility level was not taken into consideration. However, the importance of studying the relationships between a woman's marital status and the number of children was mentioned.

Accordingly, this is a brief description of basic literature which was used during the writing of this thesis. More comprehensive analysis of literature is given also in the next chapter.

2.2 The definition of family concept

This subchapter sets out to discuss the theories related to the changing dynamics of the family. This will be achieved by a discussion of the family concept and its typology. Finally, the causes and consequences of the traditional nuclear family decline and the rise of alternative forms of partnership will be analyzed.

Demographic science considers a family from the importance of its reproductive function: that a child-bearing function is the most important for any family. So far family has been considered as the only source of population reproduction. However, there is a big variety of family types. They can be classified according to family structure, type of domination in a family, way of everyday life, social, economic and geographic location, psychological health condition, etc. All of them drew the same conclusion that a family is a social group with historically defined organization, and its members are connected by conjugal or blood ties, by community of family life, by mutual moral responsibility and whose social necessity is made for society requirement in the physical and spiritual reproduction of population (Sociology of family 2001). In addition, it is appropriate to distinguish family functions which are different according to different data and different researchers. For example, F. Kamarás (1986) highlighted the following family functions: as being emotional, social, reproductive and economic. But undoubtedly, the most important typology of family remains classification, which is based on demographic factors. In other words, family has long been seen as a social institution that unites individuals to work cooperatively in the bearing and raising of children (J. Macionis and K. Plammer 2008). Moreover, family is built upon a mutual feeling of kinship, based on blood, adoption or marriage relations, and traditionally established around marriage (J. Kelly 2009). However, these definitions fail to include the units which are not based on blood or legal relationships, but around individuals who nonetheless identify themselves as a family. These unions have formed new types of partnership, such as cohabitation, same-sex partnerships etc. At the same time, the term nuclear family is defined as a married man and woman with children (J. Kelly 2009). Along with this a lot of new forms, and types of family, sometimes controversial to the nuclear families occurred. For instance, there is a big variety of types: one-parent families, step- and blended families, same-sex families, childless households and even single person households, where the strongest ties are not with

biological kin, but with intimate friends (S. Saggers and M. Sims 2004). The need for detailed analysis of family forms, types and the diversification process appeared with the decline in the nuclear family and rise in alternative forms of partnership, experienced by many countries across the world. Some European countries for example, have experienced these alternative family structures become the majority (T. Sobotka and L. Toulemon 2008).

Nowadays, demographers have a tendency to highlight two types of families: the traditional and non-traditional (or modern). According to Eleanor D. Macklin the key features of traditional and non-traditional family types are shown in Table 1.

Tab. 1 – Traditional and modern families

Traditional nuclear family	**Nontraditional family**
Legally married	Never married appears more frequently
With children	Voluntary childlessness appears more frequently
Two-parent	Single-parent (never-married; once-married)
Permanent	Divorce and remarriage (including joint custody and binuclear family, the stepfamily)
Male as primary provider and ultimate authority	Androgynous marriage (including the O'Neill's "open marriage", dual-career marriage and commuter marriage)
Sexually exclusive	Extramarital relationship (including sexually open marriage, swinging, and Ramey's "intimate friendship")
Heterosexual mostly	Acceptance of same-sex intimate relationship
Two-adult household	Multi-adult household (including multilateral marriage, communal living, affiliated families, and extended families)

Note: O'Neill's "open marriage" is marriage in which each partner has room for personal growth and can develop outside of marriage; Swinging is a non-monogamous behavior, in which partners in a committed relationship agree to engage in sexual activities with other people; Ramey's "intimate friendship" is friendship with sexual activity between two people; Multilateral marriage is marriage which involves intimate and equal bonds among three or more people or among two or more spouses.

Source: E. Macklin, 1980:906

According to the classification, which was introduced by E. Macklin (1980), the presence of one-parent families and stepfamilies as one of the characteristics of a non-traditional family is observed. In this case it is reasonable to distinguish between a traditional family and non-traditional family types. Meanwhile, it is also necessary to evaluate the level of deviation from the traditional family to become non-traditional. Thus, traditional family types are: a classic nuclear family that consists of a father, a

mother and children. In addition, there is one more type – an extended family type or a complex family including other relatives added by an ascending line (grandfathers and grandmothers) and collateral line (spouses' brothers and sisters). At the same time, such a family type may include other married couples (relatives' wives and husbands), whose members are connected by relative ties and housekeeping. Any deviation from the traditional family type is referred to as a non-traditional family type.

Along with a single-parenthood, divorce and remarriage also were included to a nontraditional family typology (E. Macklin 1980). The importance of divorce in the process of family diversification has been highlighted by numerous researchers. The most striking feature of modern society mentioned by demographers and sociologists (A. Giddens 1993, J. Macionis and K. Plummer 2008) is characterized by a sharp decline of first marriages and rapid rise in divorces. They have proposed a number of key explanations for this surge in divorce. Arguably, divorce is nowadays, in a legal sense, easier to accomplish and is also socially acceptable. Additionally, individualism is increasing with many people who are more interested in personal satisfaction than putting family first (J. Kelly 2009). Similarly, the emancipation of women and her changing status in society has contributed to the increased popularity of divorce (J. Kelly 2009). Divorce has affected the nuclear family model dramatically and has lead to a huge increase in single-parent families (T. Sobotka and L. Toulemon 2008) and also in remarriages and cohabitations (J. Macionis and K. Plummer 2008). These in turn can be evaluated as challenging the traditional nuclear family and creating a post-modern or modern family (J. Stacey 1996, J. Kelly 2009).

Accordingly, there are a lot of types of modern families. In order to understand how these new types of families have challenged the nuclear family, the identification of the most common forms appears to be important. Possible alternative partnerships and families include cohabitation, same-sex partnerships, "living apart together", single-parent families, blended or step-families (J. Kelly 2009). Therefore, in this study, the concepts of cohabitation, single-parent families, and blended or step-families will be analyzed.

In the beginning, a single-parenthood was defined as a deviation from the traditional nuclear family. For instance, R. Bruynooghe's (1986) article "One-parent families in the context of variations in parenthood: between deviance and commitment" noted the existence of two tendencies in the consideration of one-parent family phenomena as a deviation from the traditional family. The first dichotomy of thinking relies on the fact that one-parent families are products of deviation from the classic traditional family. Whereas on the basis of the second tendency there is an explanation of the one-parent family development as a new phenomenon and one of the new life style forms. As R. Bruynooghe (1986) writes "The likelihood of ambiguity can be derived from the presence of two rather contradictory tendencies existing side by side in our society, one considering single parenthood as a kind of deviance, the other considering it as commitment to a new life-style"(R. Bruynooghe 1986:32). According to the author, the main reason for the consideration of one-parent families as a deviation from the traditional family was the deficiency of one of the family functions. He goes on to state that: "The first tendency considers single-parent families as a problem. The elder one saw one-parent families (then called broken homes, partial, incomplete, or fatherless families) as a source of potential or actual functional deficiencies: one or more family functions would be performed less well or not at all: shortcomings in the socialization of the children, leading to deviant or culturally unwanted behavior or lack of parental

nurturance and parental control, lack of providing function, leading to inadequate material standards of living for children and the single parent, lack of companionship for the single parent, endangering the physical, mental and social functioning…" (R. Bruynooghe 1986:32). Moreover, there is one more opinion which seeks to explain the modern types of families as a new phenomenon or new life style. For instance, E. Macklin (1980) highlighted the following factors in her study regarding the assistance of a life style change: the increase in the number of higher educated women in comparison to the previous years of the last century, and the growth in women's labor force participation. As a result, this was followed by an increase in the number of single women of a marriageable age with active social and sexual life expansion (E. Macklin 1980). Thereby, a one-parent family is one of the characteristics of a non-traditional family which is defined either by deviation from the standard or classic traditional family, or by the appearance of a new life cycle of the family, provided by existing changes in woman's status and social, sexual, premarital relations. However, the appearance of a new family life cycle or the transformation of the existing traditional family to a modern family is also determined more or less as a deviation from a traditional family lifestyle. Even though R. Bruynooghe (1986) emphasized the great importance of distinguishing the difference between these two approaches, this study will focus on the modern families (single-parenthood, step-families and cohabitation), and their characteristics while taking into account the way of non-traditional family occurrence (divorce, widowhood). At the same time, it should be noted that it is rather difficult to define if it was an ordinary transformation connected with life style change or a deviation.

The notion of the "One-parent family" is one of the most important and crucial issues causing controversy among demographers. Consequently, this issue needs a more detailed explanation. Currently, several definitions of the term are given. In P. Stein's (1976) opinion one-parent families are families headed by an unmarried residential mother or father who lives with one or more children under the age of 18. Conversely, Hungarian demographer F. Kamarás (1986) mentioned the problems in the one-parent family concept definition. At first it may seem that it is very simple to define the "one-parent family" concept but in a more detailed consideration, more problems may occur. For example, F. Kamarás (1986) highlighted several meanings of the "one-parent family" definition in comparison with P. Stein (1976). After analysis of Hungarian census data the conclusion regarding existing married couples and also couples living together regardless of their marital status (cohabited partners) was introduced. In addition, there were several types of parents, such as: blood-parents and foster parents (foster fathers or foster mothers), living with adopted children. Even if the child has got a foster parent instead of blood-parent and lives in a step-family family he is still not a member of complete family. "…The question can be raised regarding where to include the families when one of the parents is not the child's blood-parent (foster-parent, step-parent). From a child's point of view such families can in a certain sense be considered as one-parent families…" (F. Kamarás 1986:156). In addition, the author described another example when the divorced parents live separately but their child has the possibility of communicating with a separated parent. In this case the child belongs to the category of a one-parent family de-jure, but both parents are present in his life – de-facto. Thereby, there are two approaches in the "one-parent family" concept definition: the first one is based on a conceptual consideration from the child's point of

view, when the child's family condition is taken into account (the absence or presence of blood parent). The second touches upon the conjugal condition of one of the parents, and their marital status are also considered (single, divorced or widowed). In connection with this, J. Trost (1986) in his "One-parent families after cohabitation" article, suggests considering the one-parent family expression as one of the parents (single, widowed, divorced) having one or more children living together in one house. In his opinion, the term should be considered widely and the parent who doesn't live with the child or children, but makes a definite contribution to the children's upbringing and development, should be taken into consideration too. This study was based on the definition of one-parent families as families consisting of one parent living together with a child or children under the age of 18 at one housing area. There is one more issue in the demographic literature on differences and similarities between two terms: a one-parent family and a one-parent household. To see how these two terms correlate with each other, the concept of housekeeping or household has been included. The household definition is based on the evaluation of the way of living, which aims to show the process of housekeeping. The main feature of the household is joint housekeeping or cohabitation in a residential unit (flat, house) and their combination. In contrast to the family, firstly a household may include one independently living person, and secondly include members who are not connected with others by relative or conjugal ties. For instance, Z. Pavlík and K. Kalibová's (1986) represented the Czech Statistical Office's definition of household. They assert that a household is the group of individuals living together in one residential unit and leading joint housekeeping. In their article, named as "One-parent families in Czechoslovakia", they presented a household classification which was first introduced by the Czech Statistical Office in 1961. There are two types of households which were distinguished: family households and other households. The first one included two subspecies: a complete family household (a couple living together which are in lawful wedlock or civil marriage, with children or not, regardless of the children's age, but if the children are not in another family and have not created their own family) and a one-parent family household (one parent having at least one dependent child up to the age of 26). The second type of household consists of the following subspecies: a non-family household with a high number of members (two or more people related or not related, leading joint housekeeping but not of one family), and one person living at own house or having it on lease. The presence of the unmarried mothers' phenomenon in society was first described by M. Masui (1986) in his research named "Becoming an unmarried mother: a decision process". Using Belgian data he proved the existence of unions, where unmarried mothers live together with a partner who might not be the father of their children. In addition, unmarried mothers with children can live at one residential unit with their parents or other relatives. Therefore, he demonstrated how unmarried women, who belong to a single-parent family on the base of her marital status, at the same time, can live in the extended family household. J. Trost (1986) also introduced a number of arguments in order to distinguish clear boundaries between those two terms: a one-parent family and single-parent family household. As an example he considered a single-parent household where a divorced parent lives with a new partner (mostly fathers), but meanwhile is a parent (one of the parents) to the child from a previous marriage. In this case he highlighted the necessity of clear information regarding a parent or a child's location in terms of space. Therefore, the single-parent household and one-parent family

corresponds to absolutely different units, or micro-groups including one of the parents and the child (or children). In addition, a one-parent family is not strictly limited in the space, and there are vague borders between the de-jure and de-facto statuses, whereas the household corresponds to a unit or a micro-group with sufficiently clear characteristics such as: joint housekeeping and joint dwelling. Meanwhile, it should be mentioned that the one-parent family is not always a single-parent household; at the same time, a single-parent household is not always a one-parent family. In connection with the fact that the conjugal status of any person depends on their private life circumstances and it may change quite often, some scientists consider it as a sufficiently dynamic process. Though, some characteristics (a child's condition for example) may be related to static processes. Such scientists, like M. Masui (1986) and J. Trost (1986) also introduce in the term "temporary one-parent families", or "interim population", meaning that for some members of one-parent families the given status is only one of the periods in their life cycle. The usage of these terms is only reasonable when considering one-parent families from the viewpoint of the parent's marital status. However, the approach when taking into account a child's position in the family is more static. For instance, the family concept definition is a sufficiently complicated process where consideration of the given phenomenon from various points of view needs to be given. The study of various approaches and consideration of different life situations must be highlighted. One consequence of these differences is that it is appropriate to mark out the different types of one-parent families. The one-parent family typology is also a controversial issue and needs a multi-dimensional investigation. There are several approaches to the study: stratification by internal factors (endogenous), and also by external factors (exogenous) (W. Dumon 1986). Internal factors are referred into the classification depending on the gender position of the parent or the head of the family, and it is equally appropriate to distinguish one-parent families headed by the mother or father. Another important approach is the marital status of the parent. There are one-parent families headed by divorced family members, by the widowed and by those who have never been married (especially women) but have a child or children. For instance F. Kamarás (1986) pointed out that in a single-parent family "…types can be divided basically into three groups: 1. the cessation of marriage or cohabitation through the death of one of the spouses; 2. the cessation of marriage or cohabitation through divorce or separation; 3.the undertaking to give birth to a child without marriage or cohabitation…" (F. Kamarás 1986:157). External factors influencing the presence of various one-parent family types are referred to on a macro-level by: social policy (according to the social or economic position), employment rate (employed, part time employed etc.), on a micro-level by: the family's income level (above the average, average, below the average), and the family head's educational level (higher education, high education, basic education) (W. Dumon, 1986). Therefore, in this study the definition mentioned by J. Trost (1986) as a base of further analysis was taken: a one-parent family is the family which consists of a father or a mother with at least one child under the age of 18, living together in the same residential unit, without any other individual. Therefore, two approaches were taken into account on the basis of a parent's marital status (single, divorced, widowed) and a child's position (the absence of one of the parents).

Cohabitation as a new form of family formation could play an important role in the process of diversification of family types. Therefore, the most important problems and questions regarding the

concept of cohabitation, theories, related to the analysis and measurement of cohabitation will be discussed. In demographic literature two types of cohabitation are distinguished: pre-marital and post-marital. However, the boundaries between these two types in literature are still unclear. The main measure for evaluation of cohabitation as pre-marital or post-marital is the partners' marital status (single, divorced or widowed). For instance, D. Kerr, M. Moyser, and R. Beaujot (2006) highlighted that as cohabitation has become more widespread, it is an increasingly post-marital relationship. In the event of a divorce, people are hesitant to marry for the second time and subsequently, cohabitation serves as popular alternative. That is, cohabitation first influenced the pre-marital relationship, but now it affects the post-marital relationship, and marriage itself. In some societies, cohabitation continues to be largely viewed as merely a prelude to marriage, whereas, in others, cohabitation has come to be viewed as almost indistinguishable from marriage (D. Kerr et al. 2006). However, it should be highlighted that it is very hard to give a clear definition of cohabitation. The meaning of cohabitation differs over time and space; it can also differ over time for a given couple. Meanwhile, marriage also is changing. These changes are thought to be a reflection of changes in unions themselves, including the re-institutionalization and an individualization of relationships (D. Kerr et al. 2006). The theory of institutionalization should be explained more in details. Sociological theory emphasized that the family is an institution that is a system of widely understood expectations, rules and social roles (P. Smock and W. Manning 2001). In this case, family demographer A. Cherlin (1978) coined the term "incomplete institutions" in reference to remarriage. Author argued that remarriage included the lack of clearly defined rights and obligations for step-parents and the absence of kinship terms for all of the relationships formed through second marriage. After a while S. Nock (1995) extended this idea to cohabitation, arguing that cohabitation and marriage are different relationships, with this difference stemming from the degree of institutionalization. As S. Nock (1995) states, "Cohabitation is an incomplete institution. No matter how widespread the practice, non-marital unions are not yet governed by strong consensual norms or formal laws" (S. Nock 1995:74). Also S. Nock (1995) identifies several consequences of cohabitation's weak institutionalization, including fewer obstacles to ending the relationship than with marriage, weaker integration into important social support networks, and more ambiguity about what it means to be a cohabiting partner than to be a spouse. Indeed, S. Nock finds that couples living in cohabitation report lower levels of commitment and lower levels of relationship happiness than do married people. S. Nock (1995) attributes these findings, at least in part, to a lack of institutionalization (P. Smock and W. Manning 2001). Thereby, cohabitation was considered as an incomplete institution and was placed in contrast to marriage. In order to understand the concept of cohabitation some of the possible circumstances which could fit the definition of cohabitation were included (D. Hubbart 2010:7):

- Where one or both partners have chosen not to marry;
- Where one partner is already married to another: the cohabitation could be a "second house" relationship, or the married partner may be separated from the legal spouse without having gotten formally divorced;
- Where partners are unable to marry legally, for instance, the same sex partnership;
- Where the form of marriage entered into is religious marriage or customary marriage (for

example, in Muslim countries), which is different from civil registration of marriage.

Although, in theory the concept seems straightforward – a couple is either living together or not – in practice, measuring cohabitation is not simple. Some authors (W. Manning and P. Smock 2001, J. Knab 2005) highlighted that many people mentioned that they are in cohabitation, while maintaining separate residences and spending only some of their nights together. A few researchers (J. Knab 2005, D. Hubbart 2010) have examined the ambiguous nature of cohabitation and how it impacts measurement. This impact is based on the differences in the coding of questions in surveys and the differences in understanding the situation by couples. The issue of measurement of cohabitation was highlighted by J. Knab (2005). He has defined two approaches, namely the "subjective" and "behavioral": one is based on an individual's subjective reports of whether or not they are cohabiting, and the other is based on an individual's reports about how many nights a week the couple spends together. The author came to a conclusion about the diversification of cohabitation not only according to the types (pre-marital, post-marital), but also according to nights spent by couples and spouses' rules or functions in a union. Arguably, when people enter into marriage, their status is changed. In the case of civil marriage, there is a very specific point in time when the parties change from being unmarried to being married, and this change in status is associated with new legal rights and responsibilities. In contrast, cohabitation is not formal status. There is not necessarily a point, at which it begins or ends, and there are no rituals or procedures, associated with it (D. Hubbart 2010). Therefore, the main idea is that the term of cohabitation is not based on what it is, but on the individuals' interpretations of what it is (P. Smock and W. Manning 2001). According to this perspective, it is essential to determine the meanings that individuals ascribe to relationships. Most broadly, the important insight is identifying subjective meanings which are crucial to understanding behavior and societal institutions (P. Smock and W. Manning 2001). At the same time, the main issue is an analysis of reasons to be in cohabitation with a partner, instead of marriage. An analysis of the response patterns suggests that there are a fewer rights and obligations associated with being a cohabiting partner than being a married spouse. "Many couples these days live together without being married. Here are some reasons why a person might want to live with someone of the opposite sex without marrying: 1) it requires less personal commitment than marriage; 2) it is more sexually satisfying than dating; 3) it makes it possible to share living expenses; 4) it requires less sexual faithfulness than marriage; 5) couples can make sure they are compatible before getting married; 6) it allows each partner to be more independent than does marriage" (P. Smock and W. Manning 2001:5). The analysis of cohabitation must include the study of characteristics or components, such as: configuration, the roles of partners and children, and value to society. The first and most basic dimension is configuration. Configuration researches simply mean "who lives with whom" (household structure, including the presence of children, their number, and the presence of other relatives or nonrelatives). Household configuration is the most fundamental characteristic in the analysis of cohabited partners. An example of configuration that is common in the demographic literature is extended versus nuclear family households. Documenting configuration, especially comparatively across family types, represents the first step towards understanding a family form as an institution. While networks outside the household often provide social and emotional support to household members, the co-resident household remains the major locus of

primary relationships, the redistribution of resources, and the provision of care and companionship (P. Smock and W. Manning 2001, F. Goldscheider and C. Goldscheider 1989, J. Sweet and L. Bumpass 1987). Therefore, household configurations and how these vary among subgroups have important implications in understanding family types, particularly cohabitation (P. Smock and W. Manning 2001, J. Sweet and L. Bumpass 1987, S. Yabiku, W. Axinn and A. Thornton 1999). The second dimension is roles in a family or household. This is a more complex institutional characteristic than configuration. Roles are the set of rights and obligations (or expected behaviors) associated with being in a particular position (or status) in a social structure such as a wife or husband (P. Smock and W. Manning 2001, J. Heiss 1992). As applied to cohabitation, roles are the array of family rights and obligations associated with being a parent, a child, a husband and a wife that provide guidelines for behavior (P. Smock and W. Manning 2001). The key link between roles and individual behavior is social norms, with norms being defined as generally accepted expectations of behavior such as the norm that spouses pool resources for, or care for one another in sickness or health (P. Smock and W. Manning 2001, A. Thornton, T. Fricke, W. Axinn, and D. Alwin 2001). Third, family institutions perform functions of value to society or, as described by A. Cherlin (1978), they provide "public goods" (P. Smock and W. Manning 2001). For instance, T. Parsons (1955) emphasized that marriage fulfills several core functions: sexual regulation, economic cooperation, procreation, the socialization of children, and the provision of affection and companionship (T. Parsons and R. Bales 1955). More recently, family sociologist D. Popenoe (1993) has argued that a good deal of the family's strength as an institution lies in its effectiveness in carrying out its functions (P. Smock and W. Manning 2001). However, according to some scientists cohabitation is not only fulfilling fewer functions than marriage, but also fulfilling them less well. The differences between marriage and cohabitation must be considered in detail. Accordingly, T. Sobotka and L. Toulemon (2008) highlighted the different stages of cohabitation development in Europe. They mentioned that cohabitation first spreads as a phenomenon of relatively short duration, either among divorced and separated people, or as a short pre-marital experience or a sort of a "trial marriage". During that first phase, marriage intensity may increase or remain on the same level. They argued that in this stage, cohabitation is not "competing" with marriage, and is usually not seen as an appropriate arrangement for childbearing. Furthermore, cohabitation becomes increasingly popular and accepted by society. It becomes a "habitual" or even a "normative" form of entry into union for those who eventually plan to get married, but it also serves as a substitute for marriage: it lasts longer, becomes widely adopted among young adults and "enters the arena of reproduction". Although unmarried cohabitation may eventually become a "marriage-like" relationship, it is still not a complete substitute for marriage. After a while, in most societies, long-term cohabitation is more typical, as individuals are more likely to convert their cohabitation into marriage. However, authors highlighted that many European countries partly deviate from the aforementioned general picture. Conclusively, they introduced the stages of this trend, which are widely shared across countries:

1) Diffusion: An increasing proportion of young adults enter a consensual union at the beginning of a partnership, and this eventually becomes a majority practice;

2) Permanency: Cohabitation lasts longer and is less frequently converted into marriage;

3) Cohabitation as a family arrangement: Pregnancy gradually ceases to be a very strong "determinant" of marriage among cohabiting couples, and, as a result, childbearing among cohabiting couples becomes common. Moreover, with the further spread of cohabitation, unmarried couples with children may become similar to married ones (T. Sobotka, L. Toulemon 2008: 99).

As aforementioned, the main problem in the analysis of cohabitation is measuring the processes of entrance and exit (the decision to live together, and separation). The life circumstances and variability of family types can lead to misunderstanding the process of cohabitation. Accordingly, the main characteristics in the measuring and analysis of cohabitation are not only the marital status of spouses, but also: household structure, the roles of partners and the presence of social functions. Additionally, another important factor in analysis of cohabitation as one of the family types is the subjective understanding of this process by partners. The importance of this measurement arises with the problem in evaluation of how people come to the see themselves as cohabiting partners (P. Smock and W. Manning 2001). However, as was mentioned by P. Smock and W. Manning (2001) the process of understanding and measuring of cohabitation is conceptual question, which is still being discussed. The uncertainty in the cohabitation concept, as well as in measuring cohabitation may lead to inaccurately modeling union formation and thus misunderstandings the process. Taking into account all the aforementioned factors and problems in measuring cohabitation in this study, cohabited partners were considered as people living in one household (singles, divorced or widowed) and having at least one child under the age of 18.

The other type of modern families, which need consideration, is the stepfamily. Among scientists there are a numerous definitions which consider stepfamilies from different points of view. One of the traditional definitions was mentioned by A. Koerner (2003) and considers stepfamilies as remarried couples with stepchildren under the age of 18 living in the household. However, S. Stewart (2001) highlighted that this broader definition of the stepfamily would actually account for a minority of all stepfamilies (S. Stewart 2001). Another important issue is the using of confusing terminology, as mentioned by M. Howden (2007). For example, the "blended family" is often used as a pseudonym for "stepfamily". On the other hand, there is a distinction between stepfamily and blended family: a blended family contains a stepchild, but also a child born to both parents (M. Howden 2007). Additionally, there could be two types of blended families: a "partial blended family" comprised of children of one parent only, and a "full blended family" which has children of both parents. Other terms used to describe families are reconstituted, remarried, repartnered, merged, instant or synergistic instead of stepfamily, and "social parent" may be used instead of stepparent (M. Howden 2007). Accordingly, the traditional definition of a stepfamily presumes that children live full-time within a particular household. For example, M. Howden (2007) mentioned the definition of stepfamilies as: "…those formed when parents re-partner following separation, and where there is at least one step child of either member of the couple present." (M. Howden 2007:2). However, author highlighted a problem with such a definition: it fails to recognize the changing pathways that lead to stepfamilies in modern society, where stepparent-child relationships often cross household boundaries (M. Howden 2007). For example, this definition fails to include families in which children reside in the household part time or stepfamilies where the non-resident parent has re-partnered. M. Howden (2007) offered the useful definition of stepfamily to be

inclusive, making no distinction about gender, residence or amount of contact with children, and focusing on its unique structure. The author goes on to define that a stepfamily is a family of two adults in a formal or informal marriage where at least one of the adults has children from a previous relationship. There may be children from the current union. Children may live-in full-time or part-time or may not currently have contact. This definition does not distinguish between dependent and independent children (M. Howden 2007). Additionally, there is another problem with the stepfamilies definition which needs a more detailed consideration. It is also clear that stepfamily relationships cannot be identified through marriage alone. The stepfamily is no longer merely the product of divorce or the death of a spouse. As was mentioned by S. Stewart (2006) cohabitation has transformed all types of families, including stepfamilies. "You have no doubt observed that "living together" has become extremely common. Related to the same broad economic and cultural changes that underlie non-marital childbearing (the expansion of women's work roles, sexual freedom, increasing individualism and secularization), the majority of young men and women will cohabit at some point in their lives" (S. Stewart 2006:11). Numerous demographers proposed to incorporate into the definition of stepfamilies childbearing out of wedlock and cohabitation (S. Stewart 2006, L. Bumpass, K. Raley and J. Sweet, 1995). It is essential to define stepfamilies in terms of marriages (after the dissolution of marriages) and households (including cohabited partners), and this practice will help to avoid underestimation in the measuring of stepfamilies. It is important to distinguish the family and household in definition of stepfamilies. Still the relevant problem is where the members of a family live (S. Stewart 2006). Accordingly, for stepfamilies the place of residence is dynamic, with people continually shifting from one household to another (S. Stewart 2006, M. Coleman, L. Ganong, and M. Fine 2000). Similarly as was mentioned for one-parent families, in the case of stepfamilies along with foster-parents both biological parents could stay involved with the children after divorce or separation. If adults with part-time or "visiting" stepchildren to be stepparents are considered, they would make up over half of all stepparents (S. Stewart 2006). The inclusion of nonresident family members would also increase in the numbers of stepfamilies. This is because the majority of children reside with their biological mothers after divorce and most stepmothers do not live with their stepchildren full time. However, children visited their biological fathers and keep in touch with the stepmothers (S. Stewart 2006). In this case, S. Stewart (2006) introduced the term multi-household stepfamilies. Essentially, the traditional definition of a stepfamily does not include the modern social and demographic trends which have important implications on the way that stepfamilies are defined. Table 2 compares the traditional definition of a stepfamily to a "revised" or modern definition that incorporates current trends in family transformation. Accordingly, whereas the focus of most previous studies of stepfamilies has been on remarriage, the new model also includes first married and cohabiting couples with stepchildren. Where the traditional definition emphasizes stably situated co-resident stepchildren, the new model incorporates nonresident stepchildren living in other households and shifts in residence over time. Whereas the traditional definition focuses on parenting young, school-aged, and adolescent children, the revised model expands parenting to adult children and examines parent-child relationships across the life course. Finally, whereas the majority of studies focus on heterosexual stepfamilies, the new model emphasizes both heterosexual and same-sex couples (S. Stewart 2006). According to a big variety of life courses,

demographers highlighted several types of stepfamilies. For instance, S. Stewart (2006) distinguished such types as: stepfamilies created by divorce, stepfamilies, created by extra-marital births, and cohabiting stepfamilies. In his opinion step families, created by divorce and remarriage are remarried couples who have children (of either spouse or both) from previous marriages living in the household. The children must be under the age of 18. Additionally he goes on to mention that stepfamilies created by non-marital childbearing include first marriages in addition to remarriages.

Tab. 2 – The comparison of traditional and modern definitions of stepfamilies

Assumption	Traditional	Revised
Union type	Remarriage	First marriage, remarriage, cohabitation
Residence of children	Co-resident, static	Co-resident and nonresident, dynamic
Stage of family life cycle	Childbearing, children 0-18 years	Parenting across the life course (including children 18+)
Sexual orientation	Heterosexual (“straight”)	Heterosexual or homosexual (gay or lesbian)

Source: Stewart, 2006:15

However, available sources do not distinguish stepfamilies that are remarriages from stepfamilies that are first marriages. And finally, the author discusses cohabiting stepfamilies considered as cohabiting couples with children from the previous marriage, or due to extra-marital births. However, he highlighted the problem of estimation of clear start and end dates of cohabitation. Moreover, a large amount of children enter stepfamilies through cohabitation rather than marriage, not accounting for cohabitation greatly underestimates the duration (the length of time the family has been together) of stepfamilies as well (S. Stewart 2006, L. Bumpass et al. 1994). Additionally, most estimates of stepfamilies do not include people who used to be stepparents and stepchildren, and who no longer are because their parents’ union has dissolved. This scenario is not infrequent given the instability of remarriage and cohabitation (S. Stewart 2006, L. Bumpass and H. Lu 2000, L. White and A. Booth 1985). Remarried couples, for instance, have a higher risk of divorce than first married couples (S. Stewart 2006, J. Goldstein 1999). However, relationships between the stepparent and stepchild do not necessarily disappear because the stepparent and biological parent’s union has dissolved (S. Stewart 2006). However, the measuring of stepfamilies does not consider families where children were adopted by their stepparents. For instance, this situation is common among stepfamilies, created by extra-marital fertility (S. Stewart 2006, J. Moorman and D. Hernandez 1989, A. Norton and L. Miller 1992). The role of adoption with respect to stepfamily life must also be clarified. Families in which both partners legally adopt a non-biological child (e.g., through an adoption agency) are not considered stepfamilies (S. Stewart 2006). However, partners sometimes legally adopt the biological (or adopted) children of their spouse. Among scientists there are controversial approaches in analysis of this situation. Some of them classify adopted stepchildren as “stepchildren” (S. Stewart 2006, J. Moorman and D. Hernandez 1989, A. Norton and L. Miller 1992). Other researchers (S. Stewart 2006, J. Bray and S. Berger 1993; L. Ganong and M. Coleman 2004)

consider these children the shared children of the couple because after the adoption stepparents become legally responsible for their stepchild, and after become blended family. Accordingly, along with complication of family relationships and widespread modernization of family types, the problems of estimating the stepfamily occurred. Moreover, determining the number of stepfamilies, their structure and types appears to be quite complicated. Essentially, the estimate of stepfamilies depends on how the researcher chooses to define them, and these definitions vary between data sources and studies (S. Stewart 2006). Nowadays, when family relationships become more complex, it is unclear how accurate the definitions for describing current stepfamily life are. However, despite a critical analysis of the stepfamilies definition, this study considers stepfamilies as remarried couples living in one household with children from the previous marriage under the age of 18.

Nowadays there are a huge number of various approaches and opinions regarding the meaning of the family concept. Therefore, the issue of the family definition and its types is a principal starting point of this study. Only the fundamental points of the family terminology were distinguished. In this chapter the most common characteristics peculiar to modern types of families were clearly identified. However, this phenomenon is different depending on the time and location. For instance, European families differ from the ones in Asia, as well as families of the last century differ from the modern ones. In order to evaluate the differences between them the next subchapter aimed to analyze the historical background of the traditional family transformation. A time, a place and the historical background have an important meaning for the terminology and classification of families (W. Dumon 1986). Therefore, it is essential to pay special attention to the historical past of Kazakhstan. Additionally, due to a big variety of living arrangements, influential on the family typology, the special attention to the household classification should be given.

2.3 The family diversification according to international practice of household classification

In connection with evident ambiguity in definition, as well as in delimitation of “household” and “family” concepts, a detailed investigation into this problem is essential. In this subchapter the typology of “survey” and “census” households of international practice and the gradual transformation from family to household will be described.

The peculiarities associated with the household concept as well as its classification in European countries should be highlighted. As aforementioned, the essential difference of “family” and “household” concepts is in the presence (or absence) of a blood relationship. N. Keilman (2006) highlighted the following definitive features in his “Households and Families” article: “nevertheless the difference of family from household is frequently expressed in economical load. If the family seems to be a natural biological unit, then the household is considered as the economical unit connected with the place of living, habitation conditions and etc.” (N. Keilman 2006:458). In addition, in the opinion of M. Pilon (2006), the author of the “Household and family demography” article, the households concept was created mainly in the West through the suggestion of statisticians and demographers “in search of statistical units

for operational observation that makes it possible to identify individuals without omission or double counting during censuses and surveys; gathering information on kinship being above all a method of identifying individuals…" (M. Pilon 2006:436). Households allow combining individual features typical of families that in turn simplify the process of data collection and its classification. However, the majority of problems do not appear in the data collection process, but in the methods of interpretation. Mainly, there are infinite forms and types of household classification. One of the reasons of misunderstanding and difficulties is connected with an incorrect explanation of "family" and "household" definitions, and also with the absence of an exact definition of those units as well as the absence of a common system of household classification or typology. The household classification depends on the family diversity process in the world as well as in the one region or a country. Moreover, it is further complicated by the fact that the process is still not complete. The family evolution theory (or the transformation process from traditional family types to modern ones) is the key doctrine in the household definition. The household typology is becoming more complex with the appearance of new family types. For example, Table 3 presented European households' typology, which was created by P. Laslett in 1972.

Tab. 3 – The typology of households according to Peter Laslett (1972)

Type of households	**Characteristics**
1. Solitary	a. Widows or widowers b. Single people
2. Household without a family	a. Brothers and sisters co-residing b. Other relatives co-residing c. Unrelated co-residing
3. Simple household	a. Married couple without children b. Married couple with children c. Widows with children d. Widowers with children
4. Extended household	a. Extended upward b. Extended downward c. Extended laterally d. Combination of the above
5. Multiple household	a. Multiple upward b. Multiple downward c. Multiple in both directions d. Forereaches (co-resident siblings) e. Other

Note: Extended household consists of nuclear families plus one or more relatives who do not form other couples; Extended upward is including the widowed father or mother in the nuclear family, or unmarried siblings of parents; Extended downward is including unmarried grandchildren. Multiple household is containing more than one couple, who are closely related; Multiple upward consists of the couple and the wife's parents; Multiple downward consists of the couple and a married child with spouse.
Source: M. Pilon, 2006:440

In the given classification the type of household that includes cohabited couples, stepfamilies or one-parent families does not exist. This is due to the fact that knowledge of the phenomenon in this period

was not widespread. But it should be noted that the separate category of household includes the widowed having children dependent on them. Whereas, Table 4 of the household typology illustrates more complicated forms and species of European households in 2005, where "widowed with children" are combined to a general category of "one-parent families" and both married and cohabited partners combined to a "couples with unmarried children".

Tab. 4 – The typology of households (2005)

Type of households	Characteristics
One-person households	
Multi-person households or non-family households	a. Persons related to each other b. Relatives and non-relatives c. Non-relatives
Family household	
One-family household	a. Couples with unmarried children b. Couples without children c. Lone-parent with children
Multi-family household	a. Two or more families

Source: D. Bartoňová, 2005:2

According to P. Vimard and R. Fassassi (2005) nowadays there are no "good" or "bad" household classifications because they all primarily depend on the aims of research and peculiarities of the population observed. For instance, the classification of the Czech Statistical Office for the Czech Republic includes three types of private household: dwelling, economical and census households where the census household is divided into a family household (traditional and one-parent family households) and other forms of household (free ones, those who live alone, several people not connected to family relations but live in one area) (J. Rychtaříková 2003). Consequently, in every single country (in a geographical aspect) and in every single situation (in chronological aspect) the different types, species or forms of household classification could be singled out. It is filled with different content and corresponds to forms of life and activity unique for the individual but, at the same time is general to the region.

In order to obtain a more complete picture of the household research, the experience of international organizations was analyzed. It is of great importance to evaluate the United Nation's (UN) definitions. Firstly, due to the fact that all agreements within the UN were ratified by Kazakhstan and additionally, that Kazakhstan takes into account the UN's recommendations on organization and implementation of the census. The UN recommends defining households as a "one-person household, i.e., a person who lives alone in a separate housing unit or who occupies, as a lodger, a separate housing unit but does not join with any of the other occupants of the housing unit to form part of a multi-person household as defined below; or a multi-person household, i.e., a group of two or more persons who combine to occupy the whole or part of a housing unit and to provide themselves with food and possibly other essentials for living" (N. Keilman 2006:458, UN 1998). This definition divides the households into two groups: households presented by one dweller and households where one or more dwellers live together. In addition, the inter-link between these groups includes the following precondition: joint housekeeping and habitation in one housing area. Meanwhile, two approaches were expressed and combined in a prescribed

way in the term: housekeeping-unit concept and household-dwelling concept. In projects of different authors the household concept varies between these two approaches. The first is viewed as a housekeeping-unit concept where the joint housekeeping is fundamental, and the second as a household-dwelling concept where the main factor is joint habitation in one housing area. For example, as it was mentioned by Keilman (2006), Todd and Griffiths conducted research where they investigated the influence of introduced changes carried out for the household concept to their quantity in England. Up to 1981 the majority of sociological surveys made by the Bureau of the Census referred to the households as a housekeeping-unit concept. This meant that for the household definition it sufficed to run joint housekeeping, but since 1981 changes have been made which caused the inclusion of members to the household composition, who lived in one housing area, even if they had separate housekeeping or separate food (N. Keilman 2006).

The UN (1998) also recommends the family terminology which is suggested to be included in a population census: "two or more persons within a private or institutional household who are related as husband and wife, as cohabiting partners, or as parent and child. Therefore, a family comprises a couple without children or a couple with one or more children or a lone parent with one or more children" (N. Keilman 2006:460, UN 1998). The given definition except legal spouses also includes cohabitants and one-parent families. As such three types of families are categorized: spouses in lawful wedlock (with children or without), cohabitants (or partnership) and one-parent families. In the given context the UN recommendation concerning the "child" conception definition is of great interest. The UN (1998) suggests considering a child as "any person with no partner and child who has usual residence in the household of at least one of the parents" (N. Keilman 2006:460, UN 1998). Age limits were not included in this terminology and any person is considered as a child if he lives with his parents in one housing area. The main condition is the absence of their children. The given concept however is not common to all countries, for example the Czech Republic's census only considers those children who are supported by parents (economically dependent) and at the census moment are not older than 25 years old. In addition, there is a category of children who are obliged to live in two households (for example after parents' divorce). Such children are considered to belong to one of these two households and the choice criteria between these households is presented by the presence of a residence permit at one of the households and "the largest quantity of nights" spent in one of these households. There can be cases when three or more generations live in one household: the family of grandfathers and grandmothers, families of children with grandchildren. In this case the UN (1998) suggests "A three-generation household consists of two or more separate family nuclei or one family nucleus and (an)other family member(s). A woman who is living in a household with her own child(ren) should be regarded as being in the same family nucleus as the child(ren) even if she is never-married and even if she is living in the same household as her parents; the same applies in the case of a man who is living in a household with his own child(ren). Thus, the youngest two generations constitute one family nucleus" (N. Keilman 2006:461, UN 1998). As for the terminology connected with one-parent families, step-families, and cohabited partners there is no definite explanation in the UN's recommendations. In addition, no difference is produced between one-parent families (a mother or a father who lives with children) and so called cohabiting one-parent families (a

mother or a father who has children to support and lives with a partner). What is more, there is an important fact that nowadays inaccuracies in "place of residence" concept definition can be found. The main criteria for including a certain person to that household or another is the indispensable residence in one housing area, and the introduction of clarity to the "one housing area" or "place of residence" concepts. There are also places of residence as de-jure (place of residence permit) and as de-facto (the place where a person actually lives). The UN (1998) suggests the following concept definition of "the place of residence" as a basis – "the geographic place where the enumerated person usually resides; this may be the same as, or different from, the place where he/she actually is at the time of the census; or it may be his/her legal residence. A person's usual residence should be that at which he/she spends most of his/her daily night-rests" (N. Keilman 2006:462, UN 1998). In other words the place of residence is defined by the actual location of a person at the time of census. In this case the question arises: to what category should the one-parent family member with a partner, part-time cohabited partners or stepfathers be ascribed if the partner has got his own lodging but at the moment of census is living in a one-parent family member's house?

Conclusively, there are a vast range of definitions pertaining to family and household concepts, and an infinite number on household classification and typology, provided by concrete geographic, demographic, social and cultural situations in different continents, countries and even cities. However, all of these typologies have common trend: households, as well as families are changing and have become more complex. Based on this evidence, more detailed consideration into the notion of the household concept in the statistical data of Kazakhstan is required.

2.4 Historical background of traditional family transformation to the modern family in Kazakhstan

The one-parent family, as well as cohabitation and divorce are relatively new phenomena for the traditional Kazakh society. There were not such phenomena in the historical past and it was defined by a number of reasons. The main reason is the special type of nomadic culture, traditions and norms of Kazakh law that regulated relationships in nomadic society. Up to the 20th century there was a system of customary law termed "adet". The most significant custom codification before the joining of Kazakhstan to Russia was launched by Tauke-khan (1680-1718). Seven codes "Zhety-Zhargy" created by Tauke-khan were different from written law and moreover they were mostly presented in the form of the collection of oral proverbs and well known sayings. In addition, there were particular forms of lawmaking activity by judges, for example the so called regulation "Yerezhe". They contained information on the norms of customary law that the judges would be guided on during the consideration of certain law cases. As such, the "Yerezhe" regulations became the source of law (S. Asfendiarov 1993). There was one more source with the help of which it is possible to analyze the development of family relations in Kazakh society. Under the influence of Muslims, Kazakh judges included some norms of the Shariah to the customary law which comprised several types of punishments for the dissolution of Islamic requirements (M. Abuseitov 1998). In addition, it is necessary to note that customs were also the basic source of law in Kazakh

society. Accordingly, a kind of a symbiosis of traditional law, customs and Shariah norms introduced a regulator of family-conjugal relationship allowing discussions the unpopularity of one-parent families, cohabitation and divorce in traditional society.

According to the articles of the "Zhety-Zhargy" law book there are several forms and types of family relations in Kazakh society which included the following parts (M. Kozybaev 2000):

1. Agrarian law (Zher dauy) where arguments on pastures and watering places were discussed.
2. Family and conjugal law where the order of marriage and divorce, rights and duties of spouses and family members property rights was established.
3. Military law (Askeri zan) regulating compulsory military service, the formation of military units and commanders' election.
4. Regulation on law proceeding, discussing the order of trial.
5. Punitive law, establishing punishment for various types of crime except of murder.
6. The law of "kun", establishing punishment for murders and grievous bodily injuries.
7. Widows' law (Zhesir dauy) regulating property and private rights of widows and orphans, as well as liabilities with respect to them from the community and relatives of the dead person.

Two articles are of greater interest for the purpose of this study, notably the: "Family and conjugal law" and "Widows' law". By the given source it is seen that marriage form was individual (monogamy). But among the wealthy people polygamy was also very popular. In addition, there is one more peculiarity regarding widowed mothers. This is that: levirate is the custom which aimed to re-marry the widowed woman to the husband's brother (in the case of his absence to other relatives, regardless of the fact if they were already married). Therefore, on the basis of the existing sources it could be concluded that single-parenthood, even at the presence of widowhood, was not widespread in Kazakh nomadic society. Family dissolution such as a divorce was also not popular in Kazakh society (S. Asfendiarov 1993, M. Abuseitov 1998). In order to be divorced, spouses needed a valuable reason, for example, the wife's unfaithfulness. The wife's infecundity which is one of the reasons of divorce nowadays, in the historical past was compensated by the possibility to marry again (polygamy) (M. Kozybaev 2000). A man could not use this right often because the new wife purchase required big means (the fiancé had to pay bride price "kalym" to bride's parents). In spite of its permission by law, polygamy was not a widespread form of marriage and it was influenced by the man's property status. Allowing polygamy for men, the law of Shariah put strict bans on to provide women with chastity. This was the reason of necessity to demise real children of their father. In addition, as one of the precautions of infertility prevention, marriage between relatives up to the 7^{th} generation was prohibited. It should be also noted that the crime concept (unfaithfulness to your husband for instance) merged with the evil deed concept (zhaman is), or sin (kune) and thus the unfaithfulness to your husband was equal to sin by the law of Shariah. Though by Shariah religious law, the dissolution of marriage was man's unilateral act and extremely depended on the husband's will, it should be noted that men did not use this right very often. According to the Shariah norms, children after divorce belonged to a father and that means the absence of the families' possibility to stay alone with the children after divorce of the spouses (S. Asfendiarov 1993, M. Abuseitov 1998).

With the settling of Soviet power in the territory of modern Kazakhstan along with the reforms in

policy, laws regulating family-conjugal relations were implemented in the legislation (M. Kozybaev 2000). In 1921 the "kalym" and theft, along with forced marriage, polygamy and levirate were prohibited (A. Alekseenko 2002). The equality between man and woman was recognized, and this entailed consequences directed to the change of woman's role in society which exist currently. In addition, scientific communism and scientific atheism meaning full prohibition of religious law and also Shariah were introduced. All of the family-conjugal relations were regulated by the USSR and then KazSSR Constitution. The first Soviet Constitution included such fundamental norms as: family assistance, maternity care, rights and duties of spouses, parents and children (V. Achkarian 1975). The equality of men and women in family relations declared in the Constitution and was fixed in the 3rd article of "USSR legislation foundations on marriage and family". They also included women's rights to the dissolution of marriage which had never been observed in traditional Kazakh society, and was a kind of innovation in the Soviet period (M. Kozybaev 2000). The legal position of the mother and her child was also determined by the norms of national family assistance. Meanwhile, during the divorce process priority was given to a mother and in the majority of cases children were left with her. In connection with this, the necessity of regulation of alimentary commitment between spouses took place. The law defended the right of a mother with children to the legal alimony. It also had to find out whether the sued person fulfilled his commitments to child maintenance and whether the size of the given maintenance corresponded to the law and what exactly was the real reason of filing a claim. Additionally, the government attempted to defend mothers and children's rights to receive alimonies from fathers. As for the widowed mothers with children, their rights were regulated according to the right to receive death benefit (pension) from the government (V. Achkarian 1975).

There were two official institutes of conjugal relations regulation in the Soviet society. The first was the Registry Office (ZAGS in Russian) and was of great importance to the formation, change and cessation of family-conjugal relations (A. Isachenkova 2008). It was authorized to register acts of marital status, marriages, remarriages, divorce, births and deaths and etc. As for the disputes connected with the acts of civil status (for example dissolution of marriage, affiliation, amendment or change of act entries), they were within the jurisdiction of court. The latter did not have any rights to apply coercive measures to participants of family-conjugal relations, whereas courts regarding the purpose of family and motherhood care could force them to implement their commitments. In addition there was one more so called non-governmental institute of family-conjugal relations regulation. The family right defense in the special (social legal) order was implemented by community courts. In conformity with "The case of community courts" community courts were able to "try cases on parent, tutor or trustee's non-fulfillment or improper fulfillment of their commitments for children's upbringing, on contemptible relation to parents, disgraceful behavior in family (as often as unfaithfulness, alcohol abuse and etc.), contemptible relation to women, property disputes between the spouses up to the sum of 50 roubles (an average monthly salary at this time was approximately 120 roubles), upon approval by dispute participants for legal investigation at the community court" (V. Achkarian 1975:36). The fundamental principle of the divorce was the consideration of the spouses' voluntary agreement at the dissolution of marriage and at the absence children of under the age of 18; it predetermined the dissolution of marriage by administrative means. A

simplified order of the dissolution of marriage was determined only for those cases when it was not possible to get a voluntary agreement of both spouses: when one of the spouses was imprisoned for more than three years, or if the family relations were interrupted for a long time. On behalf of children under the age of 18, a voluntary agreement of spouses was not accepted as the foundation for the dissolution of marriage by administrative means, but courts took this into account (V. Achkarian 1975). Premarital sexual relations and births out of wedlock as well as cohabitation were condemned and led to general censure at the community courts. In spite of a high moral ideology in the postwar years and in the 80s there were single cases, and later more frequent cases of extramarital births.

The number of divorces during the Soviet period has gradually increased. The number of extra-marital births has also changed dramatically. For instance in the former KazSSR, the extra-marital birth rate according to the 1979 All-Union population census was equal to 1.85 per 1000 women at fertile age. Whereas according to statistics from 1999 it increased to 6.70 per 1000 women at fertile age. The percentage of extra-marital live births also increased from 16.1 % to 27.6 % between 1979 and 1999 (A. Alekseenko 2006). Changes to woman's role and status in society, the emancipation of society appeared after this period. Significantly, these phenomena have played an important role in the diversification of family types. Nevertheless, it should be noted that during the Soviet period a traditional Kazakh family faced a number of changes substantially due to the change of the woman's role and status in society, the change of legislative base and traditional thinking, and the adoption of a new ideology which was different from the traditions and customs of the nomadic society. The occurrence of new forms of families in the nomadic pre-Soviet society was impossible due to the way of life, folk activity, custom observance, traditions and religious guidelines. Later on, at the time of the settlement of the Soviet management system there were some possibilities or so called "the resources" of new types of family formation: such as divorce low simplification, polygamy prohibition, levirate (marriage of widowed woman to a husband's relative) prohibition, women and men equality in society, premarital sexual behavior. However, it is essential to note that in the Soviet society of KazSSR, extramarital births were condemned in connection with a tough ideological upbringing. It was not widespread and took place in isolated cases. The traditional family transformation to the modern one was not a fast process. It included long and slow phased changes in mentality, in family psychology, in interrelations between men and women longed from generation to generation. This process was not finished in the Soviet period; it had features of traditional relations and at the same time features of modern family relations. In spite of this there is an undeniable fact that the beginning of a traditional family transformation to a modern family was initiated with the introduction of the Soviet management system.

After the collapse of the Soviet Union the family diversification process started developing more intensively. First of all, it was due to the political changes, which influenced changes in the economic, social and spiritual life of society. Along with the Soviet Union's collapse the ideological upbringing started to change and modern society revised priorities of development from communism construction to democratization, reformulated principles of ideology from scientific atheism to a return to the traditional and religious facilities of Kazakh society. All of this was accompanied by a deep economic, social and spiritual crisis and a heavy shock in the country that was reflected in the state of the family. The divorce

rate in Kazakhstan during the period of 1999 to 2008 dramatically increased. Similarly, the number of extramarital births did the same (S. Ualieva 2007). A more detailed analysis of modern patterns and trends in extramarital fertility, divorce and widowhood on the base of statistical data described in the MA thesis "One-parent families in the East-Kazakhstan region" (D. Ualkenova 2010).

Therefore in hindsight, the traditional family transformation on the basis of historical events played an important role in modern types of families' occurrence and became the turning point in the current demographic picture of modern Kazakhstan. The emancipation of woman, the simplification of family-conjugal legislation and global political and economic changes had a significant impact on family. Nowadays there are a numerous types of families, such as: single-parent family, blended and stepfamilies, and families with cohabited partners. All of them appear due to be result of variability of life circumstances and the way of formation and dissolution conjugal unions: divorce, death of one of the spouses, extra-marital births, cohabitation, and remarriage. In the next subchapter, existing modern tendencies of census households' development in Kazakhstan as a whole, and in the East-Kazakhstan region in particular will be examined.

2.5 From traditional family to modern households in the Soviet and Kazakhstani censuses

Nowadays, there are two sources of household study in Kazakhstan: the population census made every 10 years and the surveys. The history of the census that sprung from the second half of the 18th century, from the period of entry of Kazakhstan to the Russian Empire's composition is of particular interest. In the 18th century and in the first half of the 19th century, all population data was collected as a process of revision (K. Kalieva 2009). Starting from the sixties during the 19th century, the population enumeration was conducted in the large cities and also in a few smaller ones. Such an enumeration of the city population was made in Astrakhan province in 1873 and in the Akmola region in 1877, where the majority of Kazakhs lived (A. Alekseenko 2002). The first and last general census of the population of the Russian Empire covering also the territory of Kazakhs was held in 9 February (28 January) 1897 (K. Kalieva 2009). The census questionnaire consisted of 14 questions including: sex, age, marital status, estate, birth place, and place of residence permit, religion, native language, literacy, and occupation, occurrence of physical disability or mental disease. In order to evaluate the development of family structure the short classification that marked out only 4 family types was suggested: a) simple families – parents and children; b) compound families – parents with children and senior citizens, the structure of these families only included lineal relatives; c) unified families – simple and compound families with the structure having relatives by collateral line as brothers or sisters; d) celibate families – single persons and families composed of relatives by collateral line.

The first Soviet population census was complied in 28 August 1920 together with an agricultural census and a short register of industrial enterprises. The main report form was a personal list which had 18 questions, and, in addition to the census of 1897 included: nationality, citizenship, education, workplace, occupation, source of means of subsistence and others. The family structure used in the 1987

census remained the same in the 1920 census.

The first all-USSR population census was conducted on 17 December 1926 (A. Alekseenko 2002, K. Kalieva 2009). This census included all territories of the former Soviet Union for the first time. The classification of the demographic family composition was developed further on the base of this census. The following family types were marked out: families with a married couple, incomplete families and compound families of two or more married couples. A more detailed classification is shown in Table 5. The designations and household types remained unchanged as it was presented in the 1926 census.

Tab. 5 - The typology of households according to 1926 all USSR population census

Families with married couple:	1. Without children
	2. With all registered children
	3. With only children from previous marriages
Incomplete families	1. Without children
	2. With children
Extended families:	The family consisting of two or more married couples

Source: A. Volkov, 1999:17

The all-USSR 1937 census was conducted as a one-day census (U. Poliakov, V. Zhiromskaya, and I. Kiselev 1990). For the census organization and implementation the government involved 1,250,000 enumerators. It was the first Soviet census conducted in Kazakhstan by the one-day census principle, where the only available population was taken into account. Also, it was the first time that the control round was used in the Soviet census practice. The data received differed from the previously declared estimate of the population in the USSR and consequently, the population census organization was confirmed unsatisfactory and the materials as defective. The next all-USSR population census was conducted 17 January 1939. The majority of 1939 and 1937 census results were turned into material for administrative use and only an insignificant small part was published (U. Poliakov, V. Zhiromskaya, and I. Kiselev 1990). The methodological census basis divided families into the following categories: one married couple with children and without them; one married couple with children and without them plus one of the spouse's parents; one married couple with children and without them, with one of the spouse's parents (or without one) plus other relatives; two or more married couples with children and without them, with one of the spouse's parents (or without one) plus other relatives (or without them); mothers (fathers) with children; mothers with children and one of the mother's parents (a father); fathers with children with one of the father's parents (a mother) and other families (T. Lytkina 2008). The leading principle in this classification is the principle of differentiation by the degree of complexity of family structure. Children and life cycle stages are not taken into account. The classification allows some general indicators to be figured out, namely: the proportions of traditional and one-parent families, the proportions of simple and compound families. The traditional families are the families of married couples and the one-parent families are those with only mother (father) with children. Family distribution by the number of members allows categorizing minor, middle and large families. Combinational family grouping is performed by the number of members and by the demographic composition allowing calculating family size norm in every group.

The methodology of the 1959 postwar all-USSR census and the following three 1970, 1979 and 1989 all-USSR population censuses remained the same since they were first introduced in 1939. According to them the family was defined as a group of two or more persons connected by filiations or relationship by marriage living together and having a common budget (T. Lytkina 2008). People living beyond a family were subdivided into two categories as single persons and persons living apart from their families. The difference between them depended on the person in terms of whether he had regular financial relations with one of his relatives or not. Those who had such relations (though this concept was not fully defined) were considered as family members living apart and those who did not have such relations were considered as single persons. Such a division was introduced at the population 1939 census and remained until the 1989 census inclusive. It did not offer the possibility to sort out the category of the so called institutional population in the census data. Two completely different people categories were mixed and could not be separated: persons living single creating one-person household and persons constantly living together with no joint housekeeping but under governmental or social or religious organizations' security (custodial institutions, disabled homes, orphanages, chronic patients' hospitals, monasteries, quarter, penitentiaries and etc.). In addition, all these censuses (1939, 1959, 1970, 1979 and 1989) did not substantially differ from each other in terms of organizational and methodological relations, and it afforded the opportunity to compare various population data (T. Lytkina 2008). In view of ideological and political aims the following family groups were marked out: workpeople, collective farmers, clerks and mixed. In the further census such groupings will be revised subject to what happened regarding social economic and political improvements.

In 1999 the first independent national population census was performed in the Republic of Kazakhstan (A. Alekseenko 2001). The program took into account the cardinal changes in the social economic development of the country and society's structure, but at the same time an indispensable continuity for comparability of future census data with previous results remained. Meanwhile, an attempt was made of maximal approach regarding the performance of international analogs. Specifically, the transition of criteria and definitions was made corresponding to international recommendations for the household definition generally accepted in global practice. In compliance with international recommendations it was the first time that households became a registration unit in the 1999 census. Here the household is defined as:

- The aggregate of persons living in one housing area or part of it, jointly providing themselves with food and other necessary means for living and combining their income fully or partially;
- One person living separately at one housing area or in a part of it, singly providing himself with food and other necessary means for living.

In addition, households are divided into private households, collective households and households of homeless. The private households are those living in housing areas such as: flats, individual homes, dormitories, other living spaces and nonresidential premises adapted for living. Collective households are people constantly living in institutions of social and medical service, quarters, places of detention and religious organizations. Households of the homeless are the people of no fixed abode (those who do not have lodging). A detailed household classification was suggested which consisted of one person; one

married couple; two married couples, a mother with children or a father with children, persons not related, and other households (Statistical Agency of Kazakhstan 2000).

The central failure of the given classification is the joining of households (families) of different compositions into one type. So, in the type "households of married couples without children, with one of the spouse's parents (or without one), with a mother (a father) with children and other relatives or people not related" the households are combined together consisting of a married couple with one of the spouse's parent and without their parents as well. In addition as many sociologists note the comparability with previous census and research data was not provided during the design of household data. Nevertheless it's essential to note that "household" registration instead of previous "family" did not mean only the replacement of one concept with another but a wider range of categories were taken into consideration (Statistical Agency of Kazakhstan 2000). The household definition differed from the previous family definition of population census in two cases: firstly, one-person households were not considered as families before and were added to "single persons" or "family members living separately"; secondly, people not related and living together with a family and having common budget were not included in the family composition. They were also considered as "single persons" or "family members living separately" and if they were related between each other, then they were considered as a separate family. In essence, in the conditions of a market economy the household is the widest social phenomenon of people's habitation than the family. The household members can be relatives, persons married and persons not connected by any relations.

There is one more category named as "housekeeping" met in the standard of living statistics and in the budgetary survey particularly (Statistical Agency of Kazakhstan 2000). But a rather different definition is used: "Housekeeping is the group of people living at one housing area, combining their income and property partially or not and jointly consuming definite types of product and services, housing service and food essentially". In addition there are a few more various definitions of "housekeeping" concept close to the household's census definition and meaning housekeeping as the field of economic activity in the national economic accounting as well. To understand the similarity between the census households and economic households lit is essential to refer to the budgetary survey statistics.

The beginning of budgetary survey statistics in Kazakhstan is related to the period of the Republic's entry to the USSR, however its formation as an independent branch refers to the postwar period when budgetary surveys began their implementation on a continual basis (Statistical agency of Kazakhstan 2000). After years of Kazakhstan's independence the household statistics underwent significant changes, expanded and improved. In the period from 1991 to 1995 a Republic net of constant survey of family income and expenditures by social demographic groups was formed instead of previous all-USSR branch-wise selection principle and a new form of survey as "Family budget" was introduced. Methodical and instructive material on family budget survey was devised and adapted to practice.

Later in 1996-1998 a new program of household survey was introduced which did not take into account social demographic groups anymore. Rather it corresponded with an interconnected set of survey forms that were aimed to receive the economic and the statistical information on the level and structure of income and expenditures of household, the sources of the population's cash income, consumer goods and

services, the differentiation of population by income and expenditure level and several other economic factors. In real terms the survey data was substantially aimed at getting the information about the population's standard of living, consumption, housing conditions, education, labor market and domestic production (Statistical Agency of Kazakhstan 2000).

In 1999-2000 the government started a project on transition to new methods of household survey corresponding to international standards and this increased an opportunity to study the economic problems. In particular they confirmed a new survey, created a system of households, created a system unit of factors describing the population's standard of living and conducted monitoring of the reasons and conditions of poverty. The research was basically directed at getting information about the population's accessibility to education and health services, poverty reasons and conditions and time budget usage. Moreover, within the research of material conditions and the population's poverty reasons the activity was directed to define income criteria for labeling the population as middle class. The typology of the economic household does not exist but there is a list of characteristics which were formulated for data collection. The list of the characteristics includes: the characteristics of housing conditions of households and the accomplishment of the house occupied; household characteristics according to occupied lodging ownership; household characteristics according to the number of rooms, household characteristics according to lodging type; household characteristics according to lodging's accomplishment type; information about hygiene and sanitary conditions of households; the presence of durable goods; irregularities (cutoff) in the provision of households with housing service; drinking water availability and etc. From the list given it is obvious that these households differ from census households by the aim to receive extensive information on the scale of living, income and living conditions and are not going too deep in details on essential demographic factors: family composition, new forms of families' presence (Statistical Agency of Kazakhstan 2000).

Conclusively, the observation unit in the Kazakhstani population census was initially presented by families, in their simplest forms. Later this tendency underwent a range of changes (transition to households) connected with the complication of family-conjugal relations, the change of social economic and political situation. Meanwhile, households as the census units were introduced. The desire to correspond to the UN's recommendations led to the absence of data continuity and also to their uselessness for comparison with early census results. In addition, there are two types of households: census households and so called economic households, whose difference is mainly expressed in the kind of the information being received: whether it is social demographic or economic. The household classifications by demographic composition can be presented in various forms. The choice of concrete classification in every individual case is performed with a glance at the following conditions: the necessary degree of typology specification, the sphere of practical usage of data.

2.6 Research questions and related hypotheses

This study aimed to analyze the family transformation process in the East-Kazakhstan region. The transformation as a process based on the challenges within family and also in society. Therefore, the main

task of this study was to provide an evaluation of the factors which lead to challenges in family structures and the analysis of the circumstances of such challenges, influential on the current demographic situation in the East-Kazakhstan region. Accordingly, the study aimed to discuss what types of families could be considered as modern and to define the differences between traditional and modern family types. The next task is to examine the processes, which are influential on the occurrence of new family forms, such as: divorce, widowhood, cohabitation, remarriage and repartnering.

As it was proved in the MA thesis, the main influential factors on the appearance of one-parent families in the East-Kazakhstan region are divorce, compared to widowhood and extra-marital fertility (D. Ualkenova 2010). Conclusively, divorce as a more important factor of one-parent families' origin, is in the great interest. This study attempted to analyze the most important factors for divorce among women at fertile age in the East-Kazakhstan region. Along with demographic factors (a woman's age, the number of children, the duration of marriage, nationality), the socio-economic (place of residence, employment status, the level of education) characteristics, the psycho-social attitudes (attitudes towards marriage, divorce, etc.) and conditions under the formation of marriage (pregnancy before marriage and spouses' national differences) were taken into consideration. The main question, related to divorce is: what factors are more influential on a woman's decision to get divorced? What kinds of women according to main explanatory characteristics are more likely to divorce in the East-Kazakhstan region? Does the woman's age at marriage, nationality and number of children contribute to the intention to get divorced?

It is undoubtedly true that the dissolution of marriage has a negative impact on the level of fertility (or a woman's number of children). Accordingly, another important issue is analysis of this impact on the fertility level in the East-Kazakhstan region. Moreover, the additional factors which lead to the delivery of children after family dissolution will be examined. However, the main idea is to attempt to evaluate to what extent the family dissolution could be influential on a woman's fertility. What factors could be influential on a woman's propensity to deliver a post-dissolution child? And how the number of children ever born by a woman can vary according to the demographic (woman's age, marital status, the number of children from previous marriage) and socio-economic (employment status, educational level, place of residence, etc.) factors?

The role of remarriage and cohabitation after the dissolution of marriage is also important in the process of diversification of family types. Moreover, these factors also have an impact on a woman's possibility to deliver a post-dissolution child. Conclusively, the main idea is to evaluate the role of the most important factors which are influential to a woman's decision to be remarried or repartnered. What factors are more important: a woman's age, the number of children, the experience of marriage dissolution (divorce or widowhood) or the level of education and employment status? Is nationality important in a woman's intention to remarry? What differences exist between women, who decided to live in cohabitation after the dissolution of marriage and remarried women?

Along with these research questions the following hypotheses in this study will be analyzed. The thesis aimed to investigate the factors which have an impact on the divorce risk. Accordingly, in the demographic literature (F. Bernardi, J. Martinez-Pastor 2011) there is opinion on the positive relationship between such factors as: increase in the premarital pregnancy, the number of children and the risk of

marital dissolution. Researchers also highlighted the declining importance of socioeconomic variables, such as education and the labor force participation for women. Conclusively, the first hypothesis is that a woman's pregnancy before her first marriage increases the risk of divorce. The second hypothesis related to the assumption that a woman having a fewer number of children is more likely to dissolve her first marriage compared to a woman having two and more children.

In order to investigate the impact of family dissolution on a woman's fertility, the following hypotheses were formulated. According to demographic literature (S. Meggiolaro and F. Ongaro 2010), repartnering or remarriage clearly shows that a woman who remarried or has a new partner is expected to have one more shared child in comparison with a divorced woman without a partner. Accordingly, the hypothesis is that a new partnership (remarriage and cohabitation) is influential to childbearing after the dissolution of marriage. The other hypothesis is related to the assumption that divorced women (both, who did not enter a second union and those who repartnered and remarried) experience lower fertility levels compared to continuously married women. However, the differences between the fertility behavior of remarried and repartnered women should be also highlighted. Some demographers (A. Berrington and I. Diamond 2000, S. Meggiolaro and F. Ongaro 2010) conclude that remarried women are more likely to deliver a child compared to women living in a new partnership. In connection with this, the differences of post-dissolution fertilities between remarried and repartnered women will be analyzed. The next hypothesis is that remarried women are more likely to have a post-dissolution child in comparison with their repartnered (cohabitated) counterparts. Moreover, it was assumed that in the East-Kazakhstan region a woman's number of children from the first marriage lowers the probability to have a post-dissolution child in the new union, if she already has two and more children. Women having only one child are more likely to deliver a post-dissolution child in order to provide a sibling to a first child.

Additionally, the thesis aimed to analyze women's patterns in remarriage and cohabitation after the dissolution of their first marriage. Some demographers (R. Lampard and K. Peggs 1999, R. Parker 1999) proved the negative effect of a woman's number of children on the likelihood of being repartnered and remarried. According to other researchers (C. McNamee and R. Raley 2011) age also has negative effects on the risk of being repartnered and remarried. Additionally, the impact of previous relationship histories on the process of repartnering vary between divorced, widowed, or separated women (A. Skew, A. Evans and E. Gray 2009). Accordingly, the hypothesis related to the assumption that young women are more likely to remarry in comparison to older women, who prefer to live in cohabitation. The next hypothesis related to the number of children at the moment of dissolution of the first marriage. It comprises the assumption that women with one child from the first marriage are more likely to live in a step-family, compared to women who have two and more children at the moment of dissolution of their marriage. And finally, divorced women are more likely to build a new family after the dissolution of their first marriage compared to their widowed counterparts, who prefer to stay at the same marital status.

2.7 Data and methods

Data used in this thesis was obtained from the "The Family Transformation" survey that provides an opportunity to analyze population attitudes and opinions regarding the role of woman in society, family

formation and dissolution processes, fertility patterns according to different household statuses etc. The Family Transformation survey is a part of a project named "Internal factors of development of the East-Kazakhstan region" which was conducted in co-operation with East-Kazakhstan Regional Center of Information and Analysis in 2008 and included respondents from citizens of two main cities of East-Kazakhstan region: Ust-Kamenogorsk and Semey, and three villages located in Katon-Karagai, Shemonaiha and Ridder regions. The sample consisted of 546 women aged from 15 to 49 with at least one child under the age of 18. More detailed information regarding the sample size and its determination is included in the next chapter, related to description of survey design.

However, the limitations of the data for the following analysis should be highlighted. The data does not consider the year of death of women's spouses, which does not allow an analysis of widowhood according to the duration of marriage. Additionally, due to the lack of such data, the influence of duration since the experience of widowhood was not included in the modeling of remarriage and repartnering among widowed women. Another important issue is the absence of data regarding the premarital cohabitation among divorced and first time married women. Conclusively, the fact that a "trial marriage" was not included in the analysis of divorce risks among divorced and continuously married women. However, the data included information related to the year of divorce, the number of children, marital status and other demographic and socio-economic characteristics, which allows analyzing divorce, remarriage and cohabitation among East-Kazakhstani women and also evaluating the impact of marital instability on a woman's fertility behavior.

Respondents were stratified according to their age, marital status, education and place of residence. The issue of definition of marital status concept must be clarified. The marital status is status defined by law describing conditions of being married or unmarried. Nowadays, in the East-Kazakhstan region in particular and in Kazakhstan in general according to the "Law on marriage and family in Kazakhstan" (1998) the types of marital status are defined as: singles, married, divorced and widowed. However, the family types are beyond the scope of aforementioned marital statuses. Accordingly, in this study along with generally accepted types of marital status the status "in cohabitation" will be also considered as marital status. Additionally married respondents will be distinguished into two groups: married first time and remarried respondents.

Moreover, in this thesis the classification of education adopted during the Soviet period was used. The existing differences between national and international classifications of education should be noted. The International Standard Classification of Education (ISCED) was designed by UNESCO in the early 1970's to serve "as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally" (UNESCO 1997:1). It was approved in 1975 by the International Conference on Education in Geneva, and was subsequently endorsed by UNESCO's General Conference when it adopted the Revised Recommendation concerning the International Standardization of Educational Statistics at its twentieth session. The present classification, currently known as ISCED 1997, was approved by the UNESCO General Conference at its 29th session in November 1997. It was prepared by a Task Force established by the Director-General to that effect and is the result of extensive consultations of worldwide representation. ISCED 1997 covers primarily two

cross-classification variables: levels and fields of education. Kazakhstan also has designed the education levels according to this ISCED:

Level 0 – Pre-primary education
Level 1 – Primary education or first stage of basic education
Level 2 – Lower secondary or second stage of basic education
Level 3 – (Upper) secondary education
Level 4 – Post-secondary non-tertiary education
Level 5 – First stage of tertiary education
Level 6 – Second stage of tertiary education

In Kazakhstan's classification these levels have their analogues. Level 0 corresponds to preschool education (kindergartens), Levels 1, 2 and 3 correspond to basic education in Kazakhstan (1–4, 5–9, and 10–11years of education in the basic schools), Level 3 corresponds also to the first steps of vocational education, after 9 years of basic education (colleges, vocational schools), Level 4 corresponds to the last steps of vocational education, after 11 years of education in the basic schools, Level 5 is the first step of education in the universities (bachelor degree), and Level 6 corresponds to MA, PhD. In the analysis of respondents according to the educational level basic education, which corresponds to the Levels 1, 2 and 3, vocational education (Levels 3, and 4) and higher education (Level 5) were used.

Additionally, respondents were divided by the place of residence into two groups: urban and rural. According to the "Law on administrative-territorial system in Kazakhstan" the cities with at least 10 thousand inhabitants could be considered as urban area. At the same time the rural areas defined as localities with a population of at least 50 inhabitants (S. Sizincev 2010).

In this study the methods, such as: ANOVA, Kaplan-Meier, Life-table, Cox proportional-hazards regression, binary and ordinal logistic regression models were applied. The calculations were estimated with the help of SAS (9.2) program. According to aim of study and also in order to prepare the data for the comparative analysis the method, called ANOVA test was used. This method aimed to evidently test differences between groups of respondents divided according to their main characteristics. The main goal of this test is to find statistically significant differences between groups of respondents. The ANOVA test is based on an analysis of variances between groups and within groups, both together makes the total variance. In this study a one-way analysis of variance was used. The goal of this analysis is to test for differences amongst the means of the levels (or groups) and to quantify these differences. The estimation of statistically differences has following steps. The first step is that ANOVA calculates the mean for each of the final grading groups which are called the Group Means. The second step considered calculations the mean for all the groups combined or the Overall Mean. Then ANOVA calculates, within each group, the total deviation of each individual's score from the Group Mean, namely Within Group Variation. Next, it calculates the deviation of each Group Mean from the Overall Mean or it is also called as Between Group Variation. Finally, ANOVA produces the F statistic which is the ratio Between Group Variation to the Within Group Variation. Accordingly, if the Between Group Variation is significantly greater than the Within Group Variation, then it is likely that there is a statistically significant difference between the groups (MiniTab Inc. 2010, R. Burns 2000).

Survival analysis examines and models the time it takes for events to occur. The prototypical such event is death, from which the name "survival analysis" and much of its terminology derives, but the ambit of application of survival analysis is much broader. Essentially the same methods are employed in a variety of disciplines under various rubrics – for example, "event-history analysis". Therefore, terms such as survival are to be understood generically. Survival analysis focuses on the distribution of survival times and survival modeling examines the relationship between survival and one or more predictors, usually termed "covariates" in the survival-analysis literature (J. Fox 2002). Essentially, the methods offered in survival analysis address the same research questions as many of the other procedures; however, all methods in survival analysis will handle censored data. The Life table, survival distribution, and Kaplan-Meier survival function estimation are all descriptive methods for estimating the distribution of survival times from a sample. Several techniques are available for comparing the survival in two or more groups. Finally, survival analysis offers several regression models for estimating the relationship of (multiple) continuous variables to survival times (StatSoft Inc. Electronic statistics textbook 2011).

The Life table method computes Survival, Probability density and Hazard functions. The Cumulative proportion surviving (Survival function) is the cumulative proportion of cases surviving up to the respective interval. Since the probabilities of survival are assumed to be independent across the intervals, this probability is computed by multiplying out the probabilities of survival across all previous intervals. The resulting function is also called the survivorship or survival function. Probability density is the estimated probability of failure in the respective interval, computed per unit of time, that is: $F_i = (P_i - P_{i+1}) / h_i$. In this formula, F_i is the respective probability density in the *i* interval, P_i is the estimated cumulative proportion surviving at the beginning of the interval *i* (at the end of interval *i*-1), P_{i+1} is the cumulative proportion surviving at the end of the interval *i*, and h_i is the width of the respective interval. The hazard rate is defined as the probability per time unit that a case that has survived to the beginning of the respective interval will fail in that interval. Specifically, it is computed as the number of failures per time units in the respective interval, divided by the average number of surviving cases at the mid-point of the interval (StatSoft Inc. Electronic statistics textbook 2011).

The analysis of family dissolution process and factors, influencing on divorce also was done with the help of Kaplan-Meier estimators, which is the most common method of estimating the survival function: $S(t) = \Pr(T > t)$. Between $t = 0$ and $t = t_{(1)}$, which is the time of the first event, the estimate of the survival function is $\hat{S}(t) = 1$. Let $n_{(i)}$ represent the number of individuals at risk for the event at time $t_{(i)}$. The number at risk includes those for whom the event has not yet occurred (in our case still married), including individuals whose event times have not yet been censored. Let $d_{(i)}$ represent the number of events (divorce) observed at time $t_{(i)}$. The conditional probability of surviving past time $t_{(i)}$ given survival to that time is estimated by $(n_i - d_i) / n_i$. Thus, the unconditional probability of surviving past any time *t* is estimated by:

$$\hat{S}(t) = \prod_{t(i) \le t} \frac{n_i - d_i}{n_i}$$

In order to compare the survival functions between the two groups, several types of tests could be used. In this study the log-rank test for the two groups and the Šidák test for three or more groups were used. The log-rank test is distributed under the null hypothesis that the survival functions for the two groups are the same. Moreover, it should be noted that the log-rank test is a p-value, providing marginally significant evidence for the difference between the two groups. At the same time, for the multiple-comparison results the Šidák test is used (SAS Onlinedoc Version 8).

The Cox proportional-hazards regression examines the relationship between survival variable and one or more explanatory variables (or covariates). Proportional hazards regression assumes that the two groups have constant relative risk over time. For example, for two groups A and B there is a constant *r*

$$h_A(t) = r \times h_B(t)$$

The ratio of hazard functions is a relative risk (or relative rate):

$$r = \frac{h_A(t)}{h_B(t)}$$

Proportional hazards regression makes several assumptions. Firstly, there is a baseline hazard function $h_{(0)}(t)$ common to all individuals in all the study groups. Study groups *j* has a hazard function $h_{(j)}(t)$ that is positive multiple of the baseline hazard.

$$h_{(0)}(t) = r_{(j)} h_{(j)}(t)$$

Each group has its own hazard ratio $r_{(j)}$. And finally, explanatory variables act only on the hazard ratios (relative risks). They do not affect the baseline hazard. It should be mentioned that in proportional hazards regression the response variable is log (hazard ratio). Also the model can fit without the estimation of the baseline hazard $h_{(0)}(t)$. And the hazard ratio is exponent of regression coefficient.

$$\frac{h_B(t)}{h_A(t)} = \exp(\hat{\beta})$$

The interpretation is as follows: for an indicator variable $X_{(i)}$, $\exp(\hat{\beta})$ is the hazard ratio or relative risk comparing the two groups identified by $X_{(i)}$. Also for a continuous variable $X_{(j)}$ $\exp(\hat{\beta})$ is the relative risk corresponding to a 1-unit increase, comparing those with $X_{(j)}=x+1$ to those with $X_{(j)}=x$ (J. Fox 2002).

In this study also the logistic regression (binary and ordinal) was applied. Logistic regression is a model used for the prediction of the probability of occurrence of an event by fitting data into a logistic curve (D. Cox, E. Snell 1989, D. Collett 1991). The central mathematical concept that underlies logistic regression is the *logit*, which is the natural logarithm of an odds ratio. Therefore, binary logistic regression, where a discrete response variable is a binary variable, was used. As a binary response variable, the questions with a yes-no answer were interpreted. For binary response models, the response, Y, of an individual or an experimental unit can take on one of two possible values, denoted for convenience by 0 and 1. Suppose *x* is a vector of explanatory variables and $\pi = \Pr(Y = 1|x)$ is the response probability to be modeled (when a post-dissolution birth is absent). The linear logistic model has the form:

$$logit(\pi) = logit\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta' X$$

where α is the intercept parameter and β' is the vector of parameters or regression coefficients, which have to be estimated from the data. Each of the regression coefficients describes the size of the contribution of the risk factor. A positive regression coefficient means that the risk factor increases the probability of the event, while a negative regression coefficient means that the risk factor decreases the probability. The large regression coefficient means that the risk factor strongly influences the probability of an event (D. Collett 1991). With the help of logistic regression the relationship between risk factors, such as age, the time since marital dissolution, repartnering and remarriage, etc. and an event such as the probability of delivering a child after marriage dissolution will be analyzed.

An equation to predict the probability of the occurrence of the event of interest is as follows:

$$\pi = \frac{e^{\alpha+\beta x}}{1+e^{\alpha+\beta x}}$$

where π is the probability of the outcome of interest or "event," such as divorce, α is the *Y* intercept, β is the regression coefficient, and e = 2.71828 is the base of the natural logarithm. *X* can be categorical or continuous, but *Y* is always categorical. Accordingly, the relationship between *logit*(*Y*) and *X* is linear. However, the relationship between the probability of *Y* and *X* is nonlinear. For this reason, the natural log transformation of the odds is necessary to make the relationship between a categorical outcome variable and its predictor(s) linear (C. Peng, K. Lee, and G. Ingersoll 2002). Due to the small sample size in this study, the exact conditional logistic regression is applied. Therefore, the exact logistic regression models in the analysis of post-dissolution marital and fertility behaviors of women will be used.

In order to analyze the relationships between the number of children (or cumulated fertility) and a woman's marital status and the other factors, the ordinal logistic regression was used. This method is useful for modeling count variables (the number of children). Ordinal logistic regression refers to the case where the dependent variable has an order. The most common ordinal logistic model is the proportional odds model. If the dependent variable is really continuous, but is recorded ordinally (the number of children: the first, second and third), but that it has been divided into j categories then if the real depended variable is *y*, the model is:

$$y_i = x_i\beta + \varepsilon_i$$

However, since depended variable (the number of children) is categorized, instead previous formula should be:

$$c_k(x) = \ln\frac{P(Y \le j|x)}{P(Y \ge j|x)} = \ln\frac{\phi_0(x) + \phi_1(x) + ...\phi_j(x)}{\phi_{j+1}(x) + \phi_{j+2}(x)...\phi_j(x)} = \tau_j - x'\beta$$

where τ_j are the cutpoints between the categories, and $\phi_j(x)$ is the probability of being in class *j* given covariates *x* (R. Bender 1997).

Chapter 3

Descriptive findings

3.1 The survey design

The analysis of changes in Kazakhstani family development described in the theoretical part was aimed to investigate the diversification of family and family relationships. As a consequence of the fundamental demographic changes that have occurred during the last two decades the transformation of family from traditional to a modern is obvious. It should be mentioned that the factors, such as: the changes in extra-marital and marital fertility levels, in the family dissolution process (divorce and widowhood), in remarriage and cohabitation that will be examined during the further analysis are essential. Accordingly, performing this survey aims to investigate, evaluate and analyze all the necessary factors.

The Family Transformation survey provides an opportunity to analyze population attitudes and opinions regarding the role of woman in society, family formation and dissolution processes, fertility patterns according to different household statuses etc. The Family Transformation survey is a part of a project named “Internal development of the East-Kazakhstan region” which was conducted in co-operation with East-Kazakhstan Regional Center of Information and Analysis in 2008 and included respondents from citizens of two main cities of East-Kazakhstan region: Ust-Kamenogorsk and Semey, and three villages located in Katon-Karagai, Shemonaiha and Ridder regions. The sample consisted of 546 women aged from 15 to 49 with at least one child under the age of 18. More detailed information regarding the sample size and its determination is located in the next subchapters. A central theme of this survey is a detailed analysis of risks or event-occurrence and the patterns of their dependence. Thereby, the survey had the questions regarding the year of appearance of demographic events, such as birth, age at leaving of parental household, age at marriage, divorce etc. At the same time the questions describing attitudes, opinions needed for an explanation and prediction of a set of events were also included. According to the aim of this survey and also the information needed for further analysis, the questionnaire was divided into six blocks of questions (see questionnaire in Appendix 1).

Tab. 6 - The structure of survey

Number of variables	Number of observations	Number of questions
237	546	45

Source: Family Transformation survey, 2008

The first block of questions aimed to gather the personal information of the respondents. In essence, the respondent's year of birth, educational level (basic, vocational, university), professional skills, place of residence (urban, rural), nationality (Kazakh, Russian, other), marital status (never married, married for the first time, second marriage or married more than twice, separated, which means that the spouses are still legally married, but not living together, cohabitated partners, which is a couple, living together, but not legally married, divorced, widowed, married according to religious rules or customary marriage, which is close to cohabitation, but these spouses had their marriage ceremony in a mosque or church, without civil registration). Additionally, the information concerning the number of children and years of their birth, the level of income per person in a household, the number of household members (under the age of 18, number of economically active persons, pensioners, number of males and females in a household) were also included. The impact of respondents' educational levels, income and employment with the intention to live as a lone-parent family is very high (G. Becker 1981). This is one of the reasons of including such questions to the questionnaire. Moreover, there is a big difference between rural and urban families (S. Ualieva 2007). Essentially, this is due to differences in current economic, social and cultural development of rural and urban areas of the East-Kazakhstan region. Nowadays in urban areas people can easily gain employment, financial, social and cultural benefits, while in the rural areas it involves great financial and social difficulties. Moreover, the cities represent the metallurgical and economical centers of the region, while the biggest part of the villages is still agrarian performing traditional agriculture (crops and livestock) tasks. Despite this, the competition with Chinese agricultural and other goods is almost impossible, largely because they are much cheaper in comparison to Kazakhstani products. Easily accessible Chinese goods are destroying the East-Kazakhstan agricultural sector, except grain, which is exported to Europe. The nationality also has an impact on the intensity, character and speed of family transformation (D. Agadjanian, P. Dommaraju, and J. Glick 2008). Historically, Kazakhs behaved more traditionally then other ethnic groups, therefore the marital behavior, the intention to parent a child out of marriage and the intention to get divorced of Russians and Kazakhs is also different. The situation has changed during the last two-three decades; nevertheless the ethnical differences are still apparent.

In order to investigate the characteristics and factors of the family transformation process and data for further comparative analysis of modern and traditional families, sets of questions about parental families were included. The second group of questions aimed to gather information regarding the parents of the respondents: the year of birth of parents and siblings, the number of respondent's siblings, their nationality, the type of parental family (traditional nuclear family, family with step-parent, family with mother only, family with father only, family with grandparents, foster family or orphaned), the types of assistance provided by parents to their children and by children to parents. The type of assistance

provided by parents to their children and by children to parents was grouped as follows: moral support, help in housekeeping, financial support, and help in childcare duties.

The third block of questions was related to the opinions of the respondents about family, religion, and also gender relationship in a family and society. This part included several questions regarding the sharing of housekeeping and childcare duties between husband and wife in a household, the importance of family in comparison with work for females, the degree of religiosity and also the definition of family in the respondent's opinion. In order to investigate an individual opinion regarding the role of women and men in society, the question about the level of education suitable for males and females was included.

The next group of questions looked into female attitudes towards marriage, the main motivations of marriage, the ideal age to get married for males and females, the acceptance of premarital sexual relationships and also the question concerning a woman's pregnancy at the point of marriage. The most important part focused on the marriage dissolution process, such as divorce. This block aimed to find out the opinions of respondents regarding divorce, the answers were scaled from loyal attitudes (acceptance of divorce) to conservative (non acceptance of divorce). Moreover, the questions on the main motivations or reasons and initiators of divorce and the common obstacles which spouses faced in first years of marriage, were included.

In order to analyze the transformation of families from extended to modern; from a nuclear family to lone-parenthood main patterns and attitudes of marital and extramarital fertility should be emphasized. For these reasons the questions about the current number of children born before marriage, in the first marriage, in the second marriage and between subsequent marriages were included. In order to evaluate the number of children which could be born to married and later divorced women, the questions on planned and ideal numbers of children, the main obstacles to have the desired number of children, and the most important motivations to have first children were designed. Moreover, one of the tasks of this survey is to evaluate the role of traditional and modern families in population development. In order to achieve this task the questions on attitudes towards the contraception, abortion, the level of contraception use and the number of induced abortions experienced in a woman's lifetime were included.

The last part of the survey aimed to investigate the opinions of women from both traditional and modern families about one-parent families and the main economical and physiological differences between traditional families and lone-parent families, and the problems and advantages of being single mother.

Conclusively, the survey was designed increase the number of explanatory variables that could be useful during further analysis. The next step before introducing a comparative analysis of the survey main results is to provide a description of respondents, and conduct an analysis of the representativeness of the sample.

3.2 Sample size determination

This chapter aimed to show the representativeness of the sample. The sample was stratified by age, place of residence, nationality and marital status. Stratification is needed for two reasons: to ensure that the

sample has an adequate representation of women at young (15–29), medium (30–39), and adult (40–49) ages, and to emphasize the differences according to place of residence (urban and rural), nationality (Kazakh, Russian and other) and marital status (married mothers, single mothers, and mothers in cohabitation). According to sociologists the number of strata should be kept minimal in order to avoid dividing the sample into too many small sub-samples (M. Simard, S. Franklin 2005). Therefore, the sample was stratified by three age groups, two regions, three nationalities and three marital statuses.

Tab. 7 – The number of respondents according to age and their main characteristics (in abs. numbers)

	15–29	**30–39**	**40–49**	**Total**
Place of residence				
Urban	103	117	88	308
Rural	102	74	62	238
Total	**205**	**191**	150	**546**
Nationality				
Kazakh	100	101	82	283
Russian	98	86	65	249
Other	7	4	3	14
Total	**205**	**191**	**150**	**546**
Marital status				
Married	114	109	77	300
Single mothers (singles, widowed and divorced)	68	67	62	197
Mothers in cohabitation	23	15	11	49
Total	**205**	**191**	**150**	**546**

Source: Family Transformation survey, 2008

The testing of the representativeness of the sample was based on the testing of accuracy and precisely representativeness of the characteristics of an entire population: age, marital status, nationality and place of residence.

Tab. 8 - The age distributions by marital status: real and sample populations, East-Kazakhstan region

Real population, 1999					
Age groups	**Married (%)**	**Widowed (%)**	**Divorced (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	86.4	1.9	11.7	100.0	81,987
30–39	82.6	3.8	13.6	100.0	108,074
40–49	78.0	8.3	13.7	100.0	107,848
Total	**82.0**	4.9	13.1	100.0	297,909
Sample population, 2008					
Age groups	**Married (%)**	**Widowed (%)**	**Divorced (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	78.0	4.5	17.5	100.0	177
30–39	70.8	5.1	24.2	100.0	178
40–49	63.9	9.7	26.4	100.0	144
Total	71.3	6.2	22.4	100.0	499*

Note: *singles are excluded

Source: Statistical agency of Kazakhstan, 1999, Family transformation survey, 2008

The reason of choosing these marital statuses (instead of previous married mothers, single mothers and mothers living in cohabitation) should be explained more precisely. The sample consists of women having at least one child under the age of 18. They could be single, married, divorced or widowed. Unfortunately the age distribution of women by marital status and the number of children for Kazakhstan as well as the East-Kazakhstan region is not available in statistical data. Instead of this, the 1999 census data on number of women by age and marital status was taken. It was assumed that married, divorced and widowed women should have at least one child, which is of course, hypothetical. Table 8 shows the age distribution of women by marital status in real population and sample population (without single mothers). However, it should be noted that not all married mothers have a child in the beginning of their marriage.

Tab. 9 – The age distributions by place of residence: real and sample populations, East-Kazakhstan

Real population, 1999				
Age groups	**Urban (%)**	**Rural (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	54.9	45.1	100.0	179,689
30–39	60.6	39.4	100.0	103,077
40–49	57.6	42.4	100.0	103,655
Total	**57.2**	**42.8**	**100.0**	**386,421**
Sample population, 2008				
Age groups	**Urban (%)**	**Rural (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	50.5	49.5	100.0	205
30–39	61.3	38.7	100.0	191
40–49	58.4	41.6	100.0	150
Total	**56.5**	**43.5**	**100.0**	**546**

Source: Statistical agency of Kazakhstan, Family transformation survey, 2008

Tab. 10 – The age distributions by nationality: real and sample populations, East-Kazakhstan region

Real population, 1999					
Age groups	**Kazakh (%)**	**Russian (%)**	**Other (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	53.8	41.3	4.9	100.0	260,066
30–39	54.7	39.9	5.4	100.0	117,816
40–49	38.6	54.7	6.7	100.0	112,876
Total	**50.5**	**44.0**	**5.5**	**100.0**	**490,758**
Sample population, 2008					
Age groups	**Kazakh (%)**	**Russian (%)**	**Other (%)**	**Total (%)**	**N (in abs. numbers)**
15–29	48.8	47.8	3.4	100.0	205
30–39	52.9	45.0	2.1	100.0	191
40–49	54.7	43.3	2.0	100.0	150
Total	**51.8**	**45.6**	**2.6**	**100.0**	**546**

Source: Statistical agency of Kazakhstan, Family transformation survey, 2008

Table 9 shows a similar distribution by age and place of residence of the real and sample population. The sample population was stratified by three age groups: young, medium, and adult and two residential units: rural and urban. Table 10 presents the age distribution of respondents by their nationality and the same distribution for real population from the East-Kazakhstan region. Due to estimating the population characteristics by measuring only a part of population, sampling errors could appear. Sampling errors are

deviations of sample population from true entire population. The sampling errors could be reduced by the sample size; it decreases as the sample size increases. As the sample size increases it approaches the entire or real population, therefore approaches all characteristics of real population and finally decreases sampling error. Therefore, the maximum sampling error which could appear during estimating of sample size was evaluated. The estimated maximum value of sampling error with a sample size of 546 at the 95 % confident interval is ± 4.19 %. As such with a 95 % certainty the results have statistical precision of ± 4.19 %, while with 90 % certainty results are accurate in ± 3.47 %. However, there are a lot of possible sources of sampling error, such as: sampling design, survey (or questionnaire) designs, methods of estimation and etc. Unfortunately, these errors could not be calculated theoretically.

In summary, the analysis of sample representativeness was aimed to highlight that the sample has an adequate representation of women in the East-Kazakhstan region according to their age, marital status and place of residence. Notably, it could be concluded that the sample has sufficient level of representativeness of an entire population. However, during the sample testing the sampling errors occurred. Meanwhile, the sufficient level of representativeness, and large amounts of differences which appeared during the ANOVA test (3.4 subchapter) showed an adequate degree of confidence. Therefore, it could be concluded that we can trust the results of survey, but with small caution.

3.3 Description of respondents

This subchapter is related to the descriptive analysis of respondents according to their basic characteristics, such as: age, marital status, education, number of children etc. The average age of the respondents at the time of interview was 34.2, for urban women it makes up 35.0, for rural – 33.5.

Tab. 11 – Summary timing measures for selected events of respondents (women with at least one child)

	Total	**Urban**	**Rural**
Mean age at first birth	23.1	23.6	22.4
Mean age at first marriage	22.0	22.7	21.5
Average duration of marriage (for divorced respondents)	6.0	5.8	6.4

Source: Author's calculations

Table 11 shows the selected timing measures for events such as: first marriage, first birth and duration of marriage. The difference between rural an urban samples is insignificant. The gap between the average ages at first marriage and first birth is almost one year. Table 12 represents the main characteristics of respondents according to marital status in comparison with the real population. Essentially, the differences between sample and real populations are insignificant.

Tab. 12 – Age characteristics of respondents according to marital status

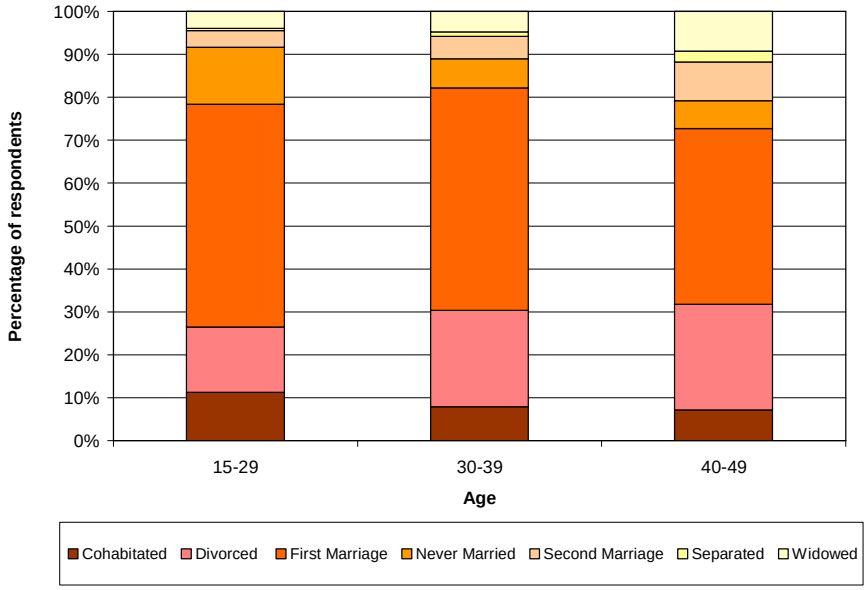
	Mean age of sample population, 2008	**Mean age of real population, 1999**	**Median age of sample population, 2008**	**Minimal age of sample population, 2008**	**Maximal age of sample population, 2008**
Never Married	31.1*	22.3**	29.0	15.0	47.0
Married	38.4	35.5	42.0	24.0	48.0
Divorced	34.7	36.5	34.5	19.0	49.0
Widowed	36.6	40.6	37.0	21.0	48.0
Total	**33.3**	**32.5**	**32.5**	**15.0**	**49.0**

Note: *= only singles with at least one child under the age of 18; **= including singles without children; real population

Source: Statistical agency of Kazakhstan 1999, author's calculations

Figure 1 demonstrates the distribution of respondents according to age and marital status. The percentage of never married mothers is represented mostly at young ages, while widowed, separated and secondly married mothers are mostly concentrated at older ages. Divorced mothers and first time married women are represented almost in all age groups. Never married mothers are mostly represented at young ages (15–29), while the percentage of widowed and separated mothers is higher at older age groups (40–49). The percentage of women living in cohabitation is higher at younger ages in comparison with older ages. Additionally, women married for the second or more times are mostly represented at adult ages. First time married mothers were taken as a control group for further analysis and are represented as well as divorced mothers at almost all ages from 15 to 49.

Fig. 1 – The percentage distribution of respondents by age and marital status

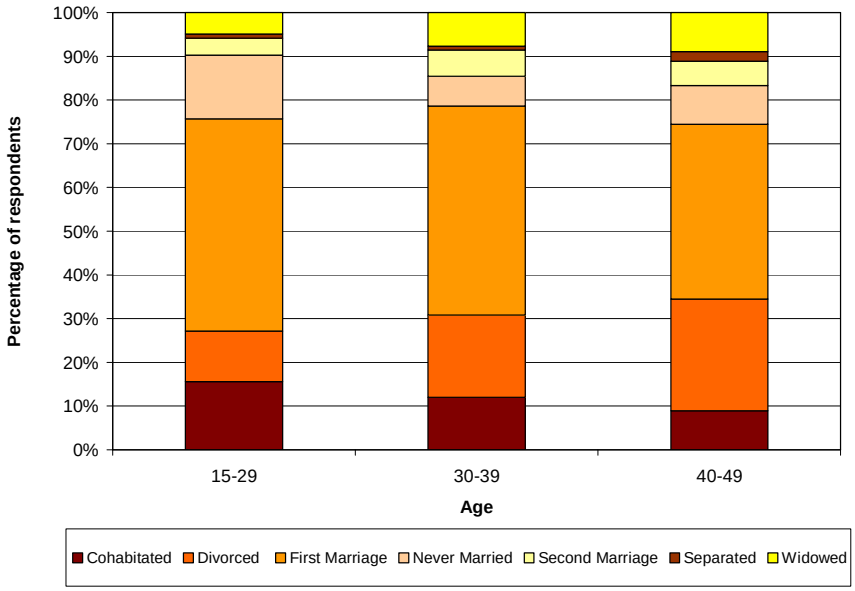


Note: Respondents having at least one child under the age of 18

Source: Authors calculations

The difference between urban and rural respondents according to age and marital status is shown in the next two Figures 2 and 3.

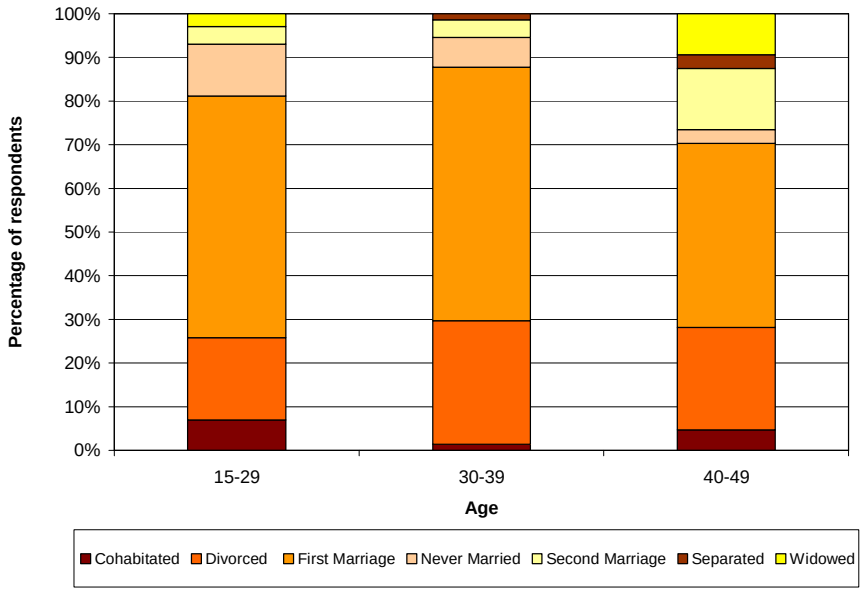
Fig. 2 – The percentage distribution of urban respondents by age and marital status



Note: Respondents having at least one child under the age of 18

Source: Authors calculations

Fig. 3 – The percentage distribution of rural respondents by age and marital status



Note: Respondents having at least one child under the age of 18

Source: Authors calculations

The percentage of women living in cohabitation is higher among urban respondents compared to the rural which are mostly represented by the first time married and divorced mothers. Notably, the percentage of widowed women is increasing with the age of women, but it remains at the level of less than 10% for both rural and urban respondents. Widowed women are mostly concentrated at senior ages (more than 49), and due to the fact that only a few women above the age of 49 have children under the age of 18, this age category was excluded from the analysis of survey results. In comparison with urban respondents, the percentage of rural never married mothers is lower for all age groups, except those aged 15–29. The percentage of rural first time married women at age 15–29 is higher compared to urban women in the same age group. Ostensibly, it might be caused by the low mean age at first marriage for rural women, while urban women prefer to get married later.

Tab. 13 – Distribution of respondents according to position in the household, living arrangements and age

	15–19	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**Total**
Respondents according to the position in the household								
With children and partner (%)	**33.3**	**67.9**	**68.3**	**65.4**	**64.3**	**59.8**	**53.8**	**63.9**
Single (in cohabitation)	**16.7**	17.0	6.9	5.6	3.6	2.7	2.6	6.0
Married (first marriage, second marriage)	**16.7**	50.9	59.3	57.0	57.1	53.6	43.6	54.9
Previously married (divorced, widowed, but in cohabitation)	**0.0**	0.0	2.1	2.8	3.6	3.6	7.7	2.9
With children and without partner (%)	**66.7**	**32.1**	**31.7**	**34.6**	**35.7**	**59.8**	**46.2**	**36.1**
Single (never married)	50.0	17.0	10.3	5.6	8.3	8.0	2.6	9.2
Married (separated)	0.0	1.9	0.0	1.9	0.0	1.8	5.1	1.3
Widowed	0.0	1.9	4.8	3.7	6.0	7.1	15.4	5.7
Divorced	16.7	11.3	16.6	23.4	21.4	23.2	23.1	20.0
Total (%)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N (in abs. numbers)	**6**	**53**	**145**	**107**	**84**	**112**	**39**	**546**
Respondents according to living arrangements								
With at least one of the parents (%)	16.7	11.3	8.3	12.1	19.0	26.1	17.9	15.5
Total (%)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N (in abs. numbers)	**6**	**53**	**145**	**107**	**84**	**112**	**39**	**546**
Average household size	3.3	3.5	3.3	3.3	3.5	3.4	3.3	3.4
Average number of children under the age of 18	1.0	1.0	1.2	1.3	1.5	1.3	1.0	1.3
Average number of economically active persons	1.2	1.7	1.8	1.6	1.5	1.5	1.9	1.7

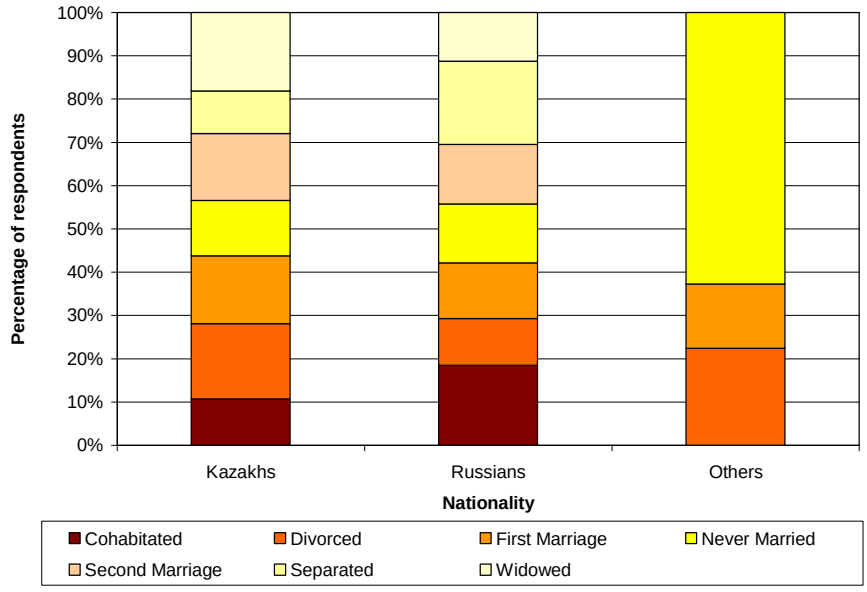
Note: Respondents having at least one child under the age of 18

Source: Authors calculations

Table 13 shows the distribution of respondents according to age and main household characteristics, such as: living arrangements, presence or absence of partner according to marital status, living with parents,

number of children under the age of 18, number of economically active persons etc. It is noteworthy to highlight the prevalence of the percentage of women living without a partner and with children which was observed in the 15–19 age group. At the same time, it should be noted that for the other age groups the higher percentage of women living with a partner (in marriage or consensual union) is clear. The percentage of those respondents who are still living with parents is higher at young and adult ages. Perhaps, this is due to the fact that unmarried young mothers prefer to stay with their parents mostly due to economic reasons (housing problems, problems to get high paid employment, education etc.). The so called middle age groups 20–34 are represented mostly by women who are living with partners or husbands, and traditionally willing to separate from both parents (wives and husbands) in order to avoid problems which appeared when sharing one housing area. Women at age 40–49 stay with their parents in order to help them and share housekeeping duties. Because in the case of high male mortality and short male life expectancy, women at these ages have mostly widowed or disabled parents that need to be supported. Average household size is approximately the same for almost all age groups and is 3.5. The average number of children under the age of 18 is higher for women at older ages in comparison with younger generations. In addition, the average number of economically active people is also higher for older women. Another important aspect is the nationality of the respondents. The percentage distribution of respondents according to marital status and nationality is displayed in Figure 4. The sample comprises of two main nationalities: Kazakhs and Russians. The category "Others" includes: Ukrainians, Germans, Poles, Tatars, Uzbeks and etc.

Fig. 4 – The percentage distribution of respondents by marital status and nationality



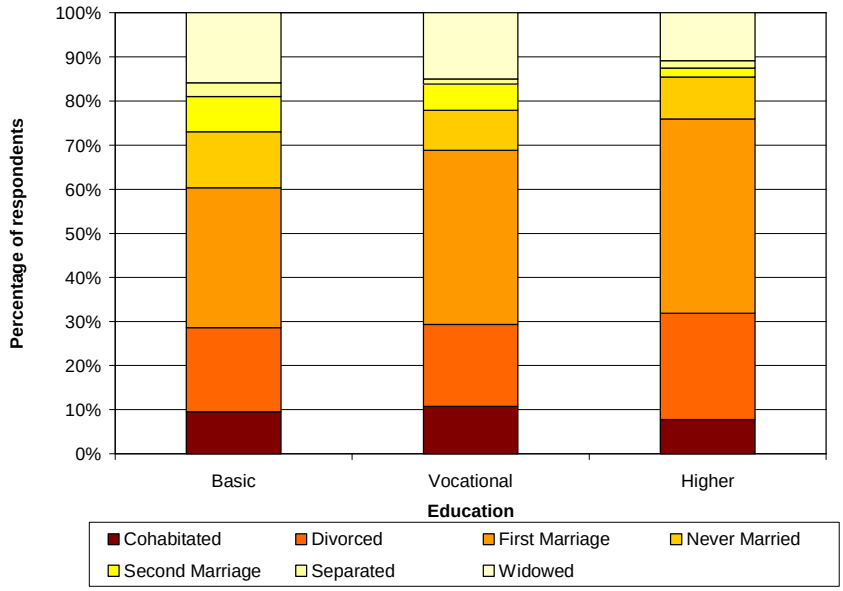
Note: Respondents having at least one child under the age of 18

Source: Author's calculations

The Kazakh women are more frequent than their Russian counterparts in marital statuses: divorced, widowed and married for the first time, but less frequent than Russians in the following categories:

cohabitation, separated, never married. Women, married for the second time include both nationalities in the same proportions. Kazakh women intend to remarry after dissolution of their first marriage less often in comparison with Russian mothers. At the same time, Russian women are more willing to live in cohabitation before marriage and after dissolution of their first marriage. Moreover, education also plays an important role in further analysis of explanatory variables. The proportion of respondents by education and marital status shows that higher educated women are more frequent in marital statuses: divorced, married for the first time, never married and separated (Figure 5). Approximately half of women are higher educated in the following categories: widowed and living in cohabitation. Higher educated women are less represented among the second time married respondents. At the same time, a lower percentage of women with only basic education are among the divorced and first time married. The highest percentage of women with basic education is among women married for the second time and separated mothers.

Fig. 5– The percentage distribution of respondents by marital status and education

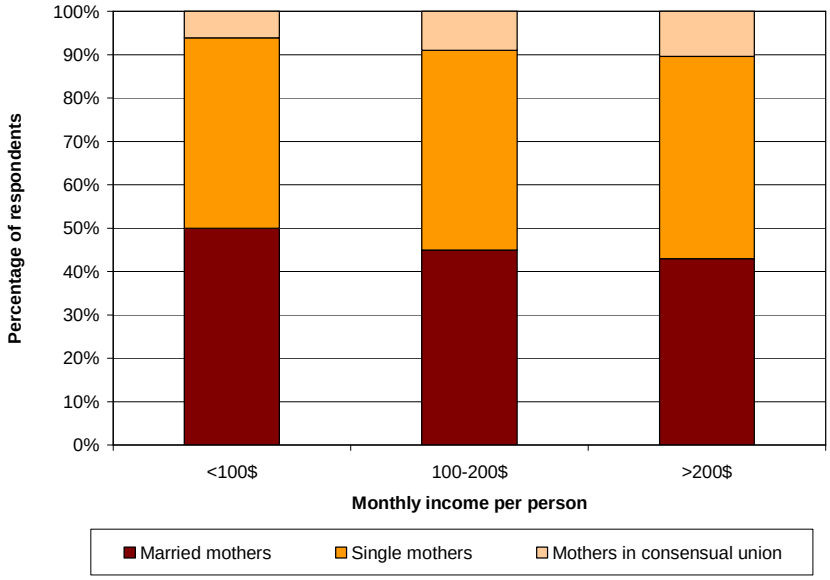


Note: Respondents having at least one child under the age of 18

Source: Author's calculations

The difference between the economic situation among single and married mothers shows the ability to survive with children in a peculiar situation (economic crisis, political changes etc.) and willing to have more children in the future. The next Figure 6 shows the percentage of respondents according to income per person in a household. According to this distribution it could be argued that those single and married mothers demonstrate approximately the same level of income. However, the difference between mothers living in cohabitation is insignificant. The differences can be observed in the detailed analysis of urban and rural respondents.

Fig. 6 – The percentage distribution of respondents by marital status and monthly income per person

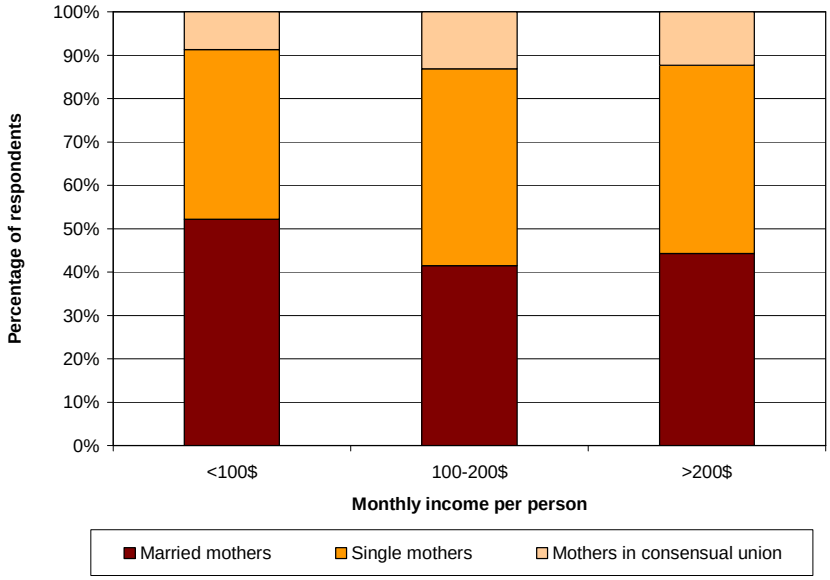


Note: Respondents having at least one child under the age of 18

Source: Author's calculations

Figure 7 demonstrates the percentage distribution of urban respondents according to the level of income per one person of the household. It is essential, that in the cities the share of inhabitants with high levels of income prevail in comparison with the others.

Fig. 7 – The percentage distribution of urban respondents by marital status and monthly income per person

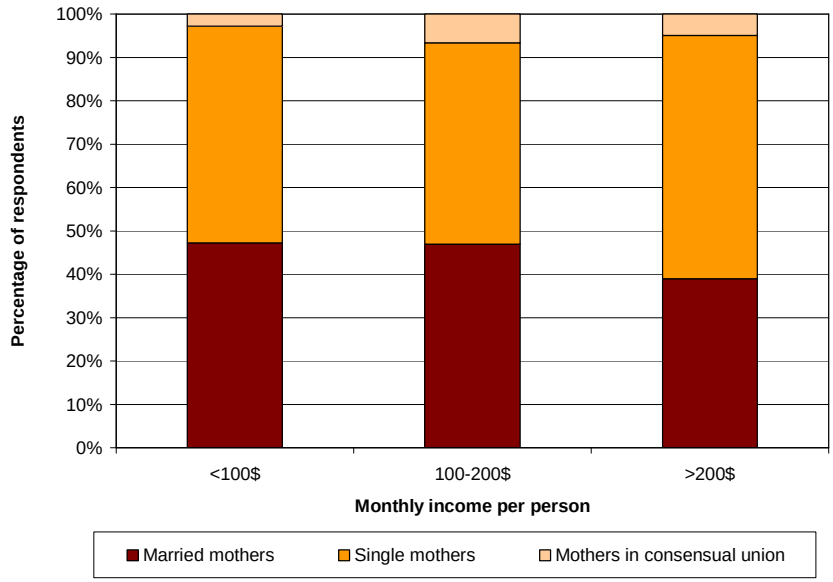


Note: Respondents having at least one child under the age of 18

Source: Author's calculations

Concurrently, it should be noted that living conditions in the cities are more expensive compared to rural agrarian areas. Rural respondents in comparison with urban respondents are mostly represented by women with a medium level of income per one person in a household. The share of women with high levels of income as well as with low levels is in the minority in villages, while the differentiation according to level of income is higher in cities.

Fig. 8 – The percentage distribution of rural respondents by marital status and monthly income per person



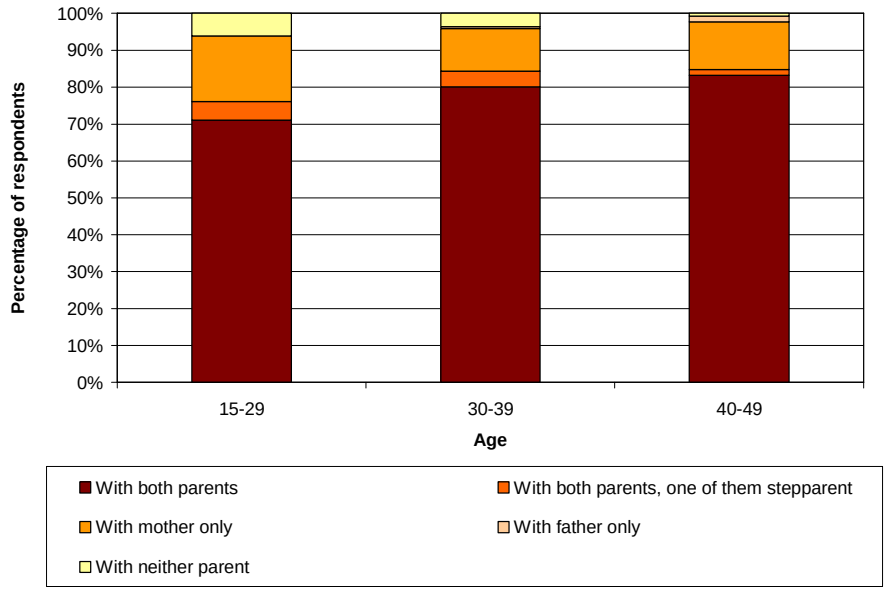
Note: Respondents having at least one child under the age of 18

Source: Author's calculations

In order to compare the main characteristics of parental family and respondents' living arrangements several questions regarding parental families were included. The type of family where respondent grew up is a significant factor during the building of respondent's own family. The distribution of respondents according to age and type of parental family is shown in Figure 9. The percentage of those who grew up with both parents is relatively high for all ages, except the 15–29 age group. The percentage of respondents who grew up with their father only is lower in comparison with those who lived with their mother only. The percentage of respondents that lived with one of the stepparents is relatively low compared to the others. It is essential that the type of parental family could be influential on the respondents' living arrangements. However, it is obvious that in the case of existing transition from a traditional (nuclear) to a modern (single parent) family, the impact of parental family type is becoming less influential. Along with this, the information regarding current respondents' marital statuses and parental family types should be analyzed in detail and tested by further analysis. Figure 10 shows the percentage distribution of respondents according to the type of family and respondents' marital status. The majority of respondents come from traditional nuclear families with both parents (more than 70 %),

the highest values are: 60 % for never married respondents and more than 80 % for married for the first time respondents.

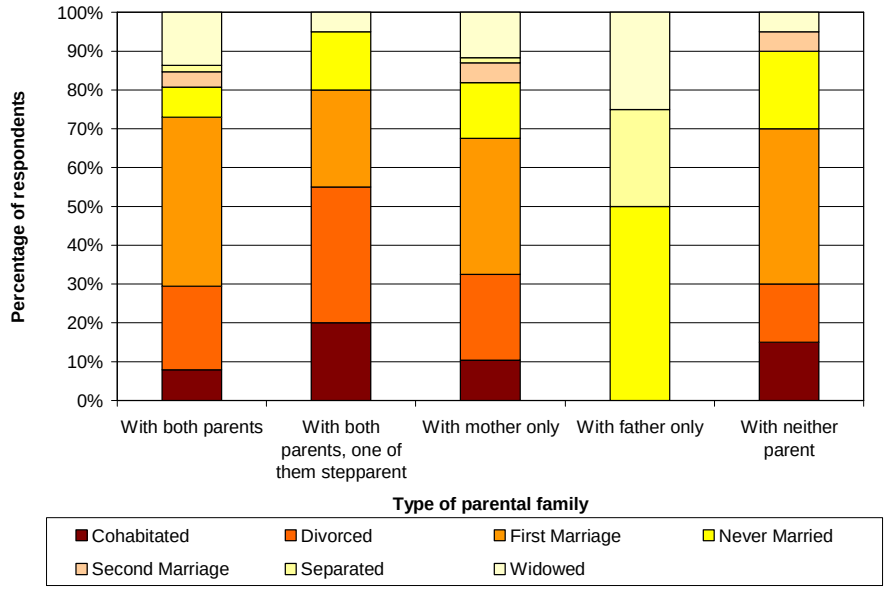
Fig. 9– The percentage distribution of respondents by age and type of parental family



Note: Respondents having at least one child under the age of 18

Source: Author's calculations

Fig. 10 – The percentage distribution of respondents by marital status and type of parental family



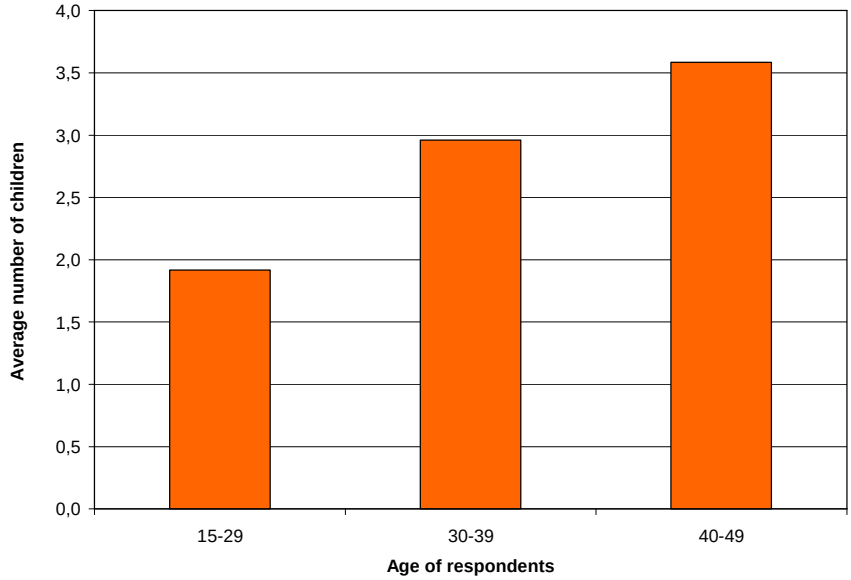
Note: Respondents having at least one child under the age of 18

Source: Author's calculations

The percentage distribution of respondents according to the average number of children in a parental family and age of respondents is shown in Figure 11. It is obvious, that the younger generations can be

characterized by the relatively low average size of children in a parental family, while older respondents have more than one sibling in their parental families. Another important issue is to investigate differences between rural and urban respondents according to number of children in a parental family.

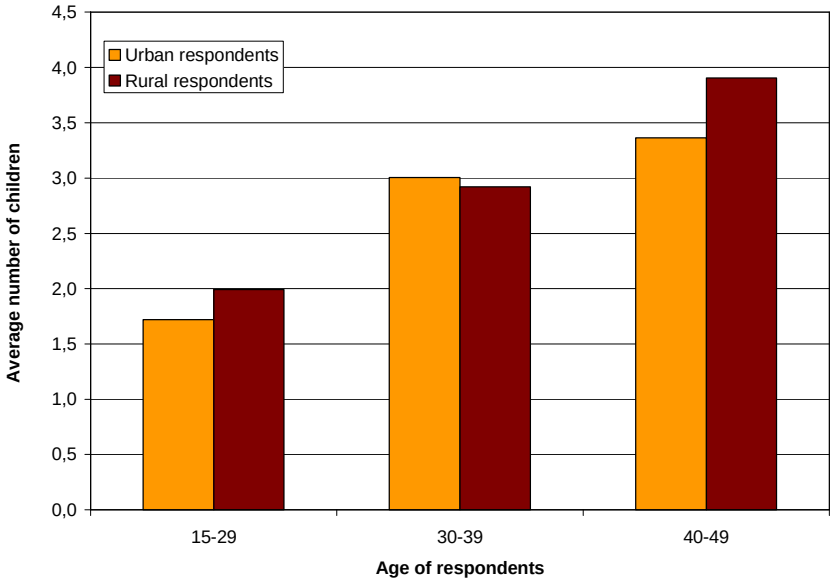
Fig. 11 – The average number of children in parental family by age of respondents



Note: Respondents having at least one child under the age of 18

Source: Author's calculations

Fig. 12 – The average number of children in parental family by place of residence and age

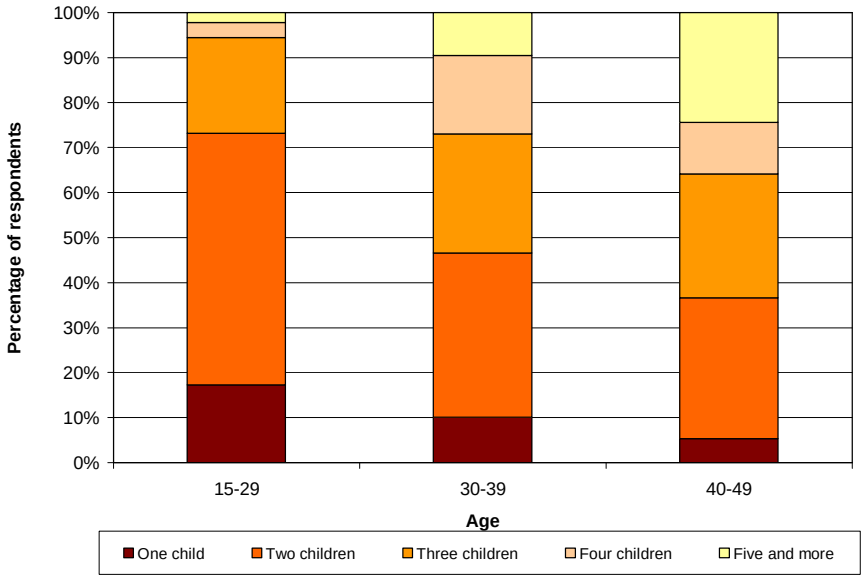


Source: Author's calculations

Surprisingly, the differences between rural and urban average size of children ever born to respondents' mothers is not visible, especially amongst the 30–39 age groups (Figure 12). The differences occurred for

relatively young and adult ages: 15–29, and 40–49, where the average size of children in urban respondents' parental family is lower than in rural families. Perhaps, this is due to the urbanization process, which is characterized by moving ethnic Kazakhs from villages to cities and also the international migration process whereby the Russians and Germans move to their ethnic homeland.

Fig. 13– The percentage distribution of respondents by age and average number of children in parental family



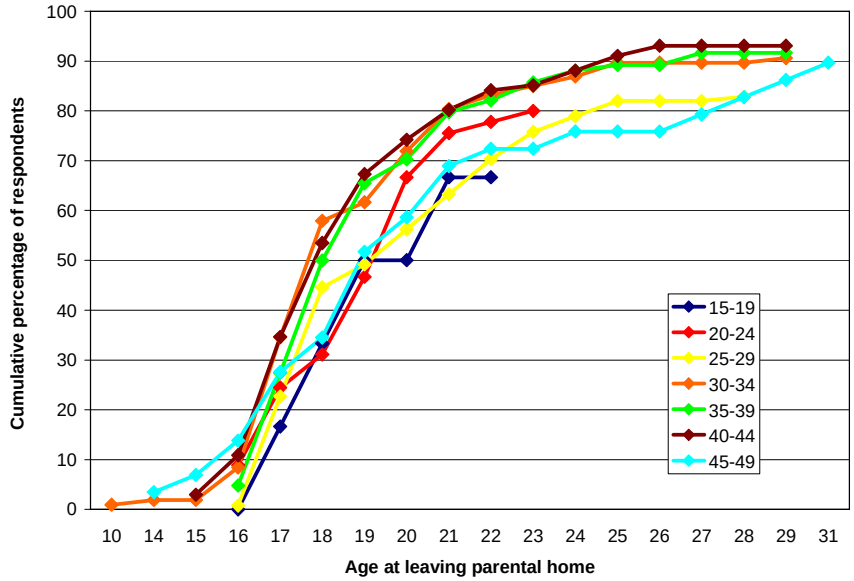
Note: Respondents having at least one child under the age of 18

Source: Author's calculations

The percentage distribution of respondents according to age and the number of children in a parental family shows the differences between the youngest respondents' families and their oldest counterparts. The Figure 13 clearly divided respondents into two groups: the first group of respondents is characterized by the young age group (15–29) and low number of children in a parental family (one or two). The other group of respondents includes older respondents (30–39, 40–49) and their families mostly consist of three, four, five and more children. This situation could be explained by reducing number of births, where women prefer to have fewer children, and move from quantitative to qualitative standards: instead of having a high number of children, have less but better educated, with better health care and economic conditions.

The cumulative percentage of respondents according to the age of leaving their parental home and age at the moment of interview (in 2008) is displayed in Figure 14. It is essential that about 90 % of respondents, who belong to the older cohort, left the parental home at 24, while almost 80 % of the representatives of the younger cohort left their parental home at 22 and 23. The older generations are willing to stay with parents longer, even if they have their own children.

Fig. 14 – The cumulative percentage of respondents by age at leaving parental family and age at interview



Note: Respondents having at least one child under the age of 18

Source: Author's calculations

Accordingly, this subchapter was related to description of respondents and their characteristics, such as: the timing measures of main events, the number of children, the percentage distributions according to marital status, educational level, place of residence, nationality and etc. Moreover, a great deal of attention was paid to respondents' parental family and their peculiarities. Additionally, the differences between parental families and families of respondents, differences between lone mothers and mothers with partners/husbands in age profile, nationality, educational level, economic situation and place of residence were discussed. In order to investigate these differences more precisely, the comparative analysis of respondents' attitudes towards position of woman in society, family formation, family dissolution and fertility according to living arrangements of respondents (lone mothers, mothers with partner/husband) should be introduced.

3.4 ANOVA test of differences between groups of respondents

In order to investigate the differences between the groups of respondents and to clarify the characteristics for further comparative analysis of respondents, the ANOVA (analysis of variance) was used. The method, called ANOVA, is aimed to evidently test differences between groups of respondents divided according to their main characteristics. In this study a one-way analysis of variance was used. The goal of this analysis is to test for differences amongst the means of the levels (or groups) and to quantify these differences. Thereby, respondents were placed into several groups by their marital status: a) unmarried mothers, which includes widowed, divorced and never married mothers, b) members of nuclear families, including married first time, second and more times, and c) the last group including women living in

cohabitation and consensual unions. Moreover, the differences according to respondents' nationality: Kazakhs, Russians and Others, educational level: basic, vocational and higher, the place of residence: urban and rural also were tested. Consequently, the null hypothesis for ANOVA is that the mean (average value of the depended variable) is the same for all groups of respondents. The alternative of research hypothesis is that the average is not the same for all groups of respondents. Additionally the ANOVA test produces the F-statistics, which is used to calculate p-value. If p-value <0.05, the ANOVA test can reject the null hypothesis. As such, it could be concluded that the average of the depended variable is not the same for all groups. The questions related to the number of children, employment status, attitudes towards marriage, divorce and etc. were taken as dependent variables. The variables related to the importance of family in comparison with work, religiousness, attitudes towards family, divorce, a partner's nationality and employment status are needed for the further analysis of predictors influential on the divorce risks among married women. The variables on respondents' plans to have more children, respondents' number of children are necessary in the following analysis of predictors of a post-dissolution childbearing and the impact of family dissolution on the women's cumulated number of children. Additionally, the variables related to the attitudes towards marriage, affect of absence of father on a child in a family, opinions regarding planning of the future marital status change will be used in analysis of women's remarriage and repartnering after the dissolution of their marriage. Accordingly, these questions which are indicated as character variables were recoded into numerical variables. The minimal and maximal values of dependent variables are indicating the codes (0, 1, 2, 3, etc.) of corresponding respondent's answers (Table 14).

Tab. 14 – Codes indicating the respondents' answers

Dependent variables	**Respondents' answers**	**Codes**
Employment status (corresponds to the question number 1.6)	Employed	0
	Unemployed	1
Number of children (corresponds to the question number 2)	One	1
	Two	2
	Three	3
The main source of help (corresponds to the question number 8)	Husband/Partner	0
	Parents	1
	Siblings/Relatives	2
	Friends	3
	Solving by herself	4
	Other	5
Importance of a family in comparison with work (corresponds to the question number 10)	Family	0
	Rather family than work	1
	Both family and work	2

Tab. 14 continued

	Rather work than family	3
	Work	4
Childcare duties in a family (corresponds to the question number 11)	Husband	0
	Wife	1
	Grandparents	2
	Elder child(ren)	3
	Childcare facilities	4
Religiousness (corresponds to the question number 14)	Yes	0
	Rather yes than no	1
	Rather no than yes	2
	No	3
Attitudes towards family (corresponds to the question number 16)	Husband and wife	0
	Husband, wife and children	1
	Husband, wife, children and spouses' parents	2
	All relatives	3
	Only my children and my parents	4
	Only me and my children	5
Planning of the future marital status change (corresponds to the question number 18)	Living without a partner	0
	Cohabitation	1
	Living in current marriage	2
	Living in marriage, including remarriage	3
	Other	4
Attitudes towards marriage (corresponds to the question number 19)	Strongly agree	0
	Agree	1
	Disagree	2
	Strongly disagree	3
Attitudes towards partner's nationality (corresponds to the question number 21)	Very important	0
	Rather important	1
	Rather unimportant	2
	Not important	3
Attitudes towards divorce (corresponds to the question number 26)	The optimal solution	0
	It is normal if spouses agree	1

Tab. 14 continued

	It is an extreme solution	2
	It is better to find other solution	3
	It is not accepted	4
	Other	5
Plans to have more children in the future (corresponds to the question number 40)	Yes	0
	No	1
The affect of absence of father on a child (corresponds to the question number 42)	No affect	0
	Positive affect	1
	Negative affect	2

Note: Questions are located in Appendix 1

Source: Family transformation survey, 2008

The initial Table 15 shows the distribution of p-values by selected questions in the survey for groups of respondents according to their characteristics. This is the most important information which represents the p-value for the overall ANOVA test. This p-value is testing the overall model in order to determine if there is a difference in means between groups of respondents. Consequently, if the p-value is small, it can be concluded that there is a statistically significant difference between groups.

The statistically significant differences in the groups stratified according to marital status are more frequent in comparison with the other groups, designed by nationality, education and place of residence. For instance, the respondents' number of children is different according to their marital status and nationality. Women's educational level and place of residence are not significantly affecting on the respondents' number of children in the East-Kazakhstan region. At the same time the respondents' employment status is different according to their marital status, nationality and educational level, however the place of residence does not play a statistically significant role in the women's employment status. Additionally, the respondents' answers related to the main source of help in a family are only different according to the respondents' marital status. The respondents' opinions regarding the main source of help in a family are not significantly dependent on their nationality, level of education and place of residence. The variable highlighting the importance of family in comparison with work is also significantly affected by women's marital status in comparison with respondents' nationality, educational level and place of residence. Essentially, the women's opinions related to the distribution of childcare duties in a family are strongly influenced by women's marital status, nationality and place of residence. However, the respondents' educational level does not affect on the differences in women's opinions about the distribution of childcare duties in a family. Accordingly, the variable concerning the respondents' level of religiousness is influenced by the women's marital status, nationality, education and place of residence. The women's attitudes towards family along with opinions regarding marriage are significantly influenced by respondents' marital status. At the same time, the respondents' nationality, education and place of residence do not reveal any differences in women's attitudes towards family as well as marriage.

The respondents' plans regarding the future marital status change are different by women's marital status, nationality and place of residence.

Tab. 15 – Effects of marital status, nationality, education, place of residence on selected respondents' characteristics

Dependent variables	**Minimal value**	**Maximal value**	**Differences by marital status**	**Differences by Nationality**	**Differences by Education**	**Differences by place of residence**
Employment status	0=employed	1=unemployed	0.0056*	0.0030*	0.0003*	0.6532
Number of children	1=one child	3=three children	0.0376*	0.0001*	0.1488	0.1725
The main source of help	0=husband	5=other	0.0001*	0.6282	0.7890	0.2166
Importance of work or family	0=family	3=work	0.0002*	0.9951	0.4887	0.4370
Childcare duties in family	0=husband	7=other	0.0057*	0.0213*	0.9354	0.0011*
Religiousness	0=yes	3=no	0.0002*	0.0003*	0.0347*	0.0032*
Attitudes towards family	0=husband and wife	5=me and my children	0.0001*	0.5678	0.9477	0.9039
Planning of the future marital status change	0=living without a partner	4=other	0.0001*	0.0009*	0.1758	0.0004*
Attitudes towards marriage	0=strongly agree	3=strongly disagree	0.0001*	0.0726	0.5152	0.9355
Attitudes towards partner's nationality	0=very important	3=not important	0.0185*	0.0001*	0.0086*	0.1074
Attitudes towards divorce	0=optimal solution	5=other	0.0007*	0.0009*	0.3670	0.0331
Plans for having more children in the future	0=yes	1=no	0.0001*	0.3504	0.4404	0.0158*
The affect of absence of father on a child	0=no affect	2=negative affect	0.0001*	0.0277*	0.2173	0.1374

Note: * = $p<0.05$; questions are located in Appendix 1
Source: SAS output

The women's educational level does not play significant role in the respondents' intention to change their current marital status in the future. Additionally, the existed differences in respondents' attitudes towards a partner's nationality are strongly influenced by women's marital status, nationality and

educational level. Moreover, women's attitudes towards divorce are significantly different according to their marital status and nationality, while education and place of residence are least influential on the respondents' opinions concerning divorce. Women's plans to have more children in the future are strongly dependent on their current marital status and place of residence; whereas respondents' nationality and education are not significantly influential on planning of the future childbirths. The respondents' opinions related to the affect of absence of father on a child in a family are significantly different according to the women's marital status and nationality, while the educational level and place of residence are not influential on this issue. Therefore, this table suggests that there are differences among the hypothetical groups of respondents (at least between two groups), but it does not reveal any information regarding the nature of these differences. The exception is the groups, stratified by place of residence. There are only two groups according to place of residence: urban and rural, and it is comprehensible that the differences could be only between those two groups. Accordingly, the next step is to determine where the differences lie for the hypothetical groups, when they have more than two groups of respondents. For example, it is impossible to evaluate the differences within hypothetical groups stratified by: marital status (single mothers, married mothers and cohabited women), nationality (Kazakhs, Russians, Others) and educational level (higher, vocational and basic).

Accordingly, the mean comparison method could be used to gather further information. There are different types and methods of comparison aimed to investigate the differences between groups. The usage of Tukey Studentized Range comparison (or Tukey's multiple comparison procedure) (at the alpha = 0.05 level) seems to be more easy and clear in this case. The tables below show the results of the comparison of groups between each other. The Tukey grouping tables display those differences and confident limits.

Tab. 16 – Effects of marital status on the respondent's number of children

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Nuclear family and Single mother	0.11	-0.02	0.24
Nuclear family and In cohabitation	0.20	-0.03	0.43
Single mother and In cohabitation	0.09	-0.14	0.31

Note: * = p<0.05

Source: SAS output

Although the difference between the groups of respondents for the second question related to the respondents' number of children was significant (Table 15), statistically significant differences related to marital status among groups were not found (Table 16). All differences by respondents' marital status between means are relatively small. However, the impact of marital status on this variable must be tested in the following analysis more precisely. At the same time this variable corresponding to the number of

children is different according to respondents' nationality (Table 17). Key differences are evident between Kazakh and Russian respondents.

Tab. 17– Effects of nationality on the respondent's number of children

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Kazakh and Other	0.18	-0.21	0.56
Kazakh and Russian	0.22*	0.10	0.35
Other and Russian	0.05	-0.34	0.43

Note: * = p<0.05

Source: SAS output

The next Table 18 shows the Tukey range comparison for variable related to the main source of help in a family, which is only significant for groups stratified by marital status. On the base of this test two main groups clearly observed: first group consisting of single mothers and the second group including members of nuclear family and women in cohabitation. The difference between single mothers and the nuclear family is large, as well as the difference between single mothers and women living in cohabitation. At the same time, the difference between women from nuclear family and women living in cohabitation is insignificant.

Tab. 18 – Effects of marital status on the main sources of help in a family

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Single mother and In cohabitation	2.28*	1.51	3.06
Single mother and Nuclear family	2.46*	2.02	2.91
In cohabitation and Nuclear family	0.18	-0.60	0.96

Note: * = p<0.05

Source: SAS output

Table 19 contains the comparison between groups of respondents for the variable related to the respondents' opinions regarding the importance of family in comparison with work. This table as well as the previous one divided the respondents into two groups: single mothers in one group and the nuclear family along with women living in cohabitation in the other group. The differences between the nuclear family and women living in cohabitation are insignificant. Accordingly, the single mothers gave significantly opposite answers to a question related to the importance of a family compared to the women with partners (women living in nuclear families and in cohabitation).

Tab. 19 – Effects of marital status on the importance of family in comparison with work

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Single mother and Nuclear family	0.24*	0.09	0.40
Single mother and In cohabitation	0.34*	0.07	0.61
Nuclear family and In cohabitation	0.10	-0.17	0.37

Note: * = p<0.05

Source: SAS output

The statistically significant differences according to marital status, nationality and place of residence occurred in answers for the question related to the distribution of childcare duties in a family. Table 20 shows the effect of marital status on the respondents' opinions regarding the distribution of childcare duties in a family. According to the comparison of means, the statistically significant difference between single mothers and members of the nuclear family is clearly observed. At the same time one of the groups of respondents such as: living in cohabitation is located in intermediate position between women living in nuclear families and single mothers. Notably, the group of women living in cohabitation has mean value of answers higher than single mothers but lower than members of the nuclear family.

Tab. 20 – Effects of marital status on the childcare duties in a family

Groups comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Nuclear family and In cohabitation	0.36	-0.53	1.25
Nuclear family and Single mother	0.70*	0.19	1.21
In cohabitation and Single mother	0.34	-0.55	1.23

Note: * = p<0.05

Source: SAS output

Table 21 shows the effects of nationality on the opinions regarding the distribution of childcare facilities in a family. The main differences in opinions exist between the Kazakh and Russian women, while Other ethnic groups are not significantly different.

Tab. 21 – Effects of nationality on the childcare duties in a family

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Russian and Other	0.58	-0.96	2.13
Russian and Kazakh	0.58*	0.09	1.08
Other and Kazakh	0.00	-1.54	1.54

Note: * = p<0.05

Source: SAS output

Respondents' answers to the question related to the religiousness of respondents are different according to the marital status, nationality, education and place of residence. Table 21 shows the effect of respondents' marital status on the level of their religiousness, which is significantly different according to the overall test. Accordingly, two main groups are clearly observed: the religiousness of members of nuclear families is significantly different from the religiousness of single mothers and women living in cohabitation. Meanwhile, the differences between single mothers and women living in cohabitation are insignificant.

Tab. 22 – Effects of marital status on respondents' religiousness

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
In cohabitation and Single mother	0.04	-0.30	0.39
In cohabitation and Nuclear family	0.37*	0.02	0.71
Single mother and Nuclear family	0.33	0.13	0.52

Note: * = p<0.05

Source: SAS output

Tab. 23 – Effects of nationality on respondents' religiousness

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Russian and Kazakh	0.32*	0.13	0.52
Russian and Other	0.43	-0.16	1.03
Kazakh and Other	0.11	-0.48	0.70

Note: * = p<0.05

Source: SAS output

Table 23 shows the effect of nationality on the respondents' religiousness. Accordingly, it could be concluded that the differences are statistically significant between Kazakh and Russian respondents. Additionally, the differences of respondents' religiousness by their educational level are presented in

Table 24. The significant differences in the level of religiousness occurred between higher educated respondents and respondents with a basic educational level. At the same time, respondents with vocational education are positioned between those two groups, and their mean value is not different from the values of respondents with basic and higher education.

Tab. 24 – Effects of education on respondents' religiousness

Group comparison of categories by education	**Difference between means**	**Simultaneous 95 % confidence limits**	
Basic and Higher	0.33*	0.02	0.63
Basic and Vocational	0.43	-0.29	1.15
Higher and Vocational	0.10	-0.57	0.77

Note: * = p<0.05

Source: SAS output

Table 25 shows the effect of marital status on respondents' attitudes towards family. The opinions related to a family are significantly different between single mothers and members of nuclear families. Additionally, the differences in attitudes towards family occurred between single mothers and women living in cohabitation. Accordingly the two groups of respondents clearly observed: single mothers in one group, and respondents living in nuclear families along with women in cohabitation in other group. The attitudes towards family are not statistically different for members of nuclear family and women living in cohabitation.

Tab. 25 – Effects of marital status on attitudes towards family

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Single mother and Nuclear family	0.59*	0.35	0.83
Single mother and In cohabitation	0.76*	0.34	1.18
Nuclear family and In cohabitation	0.17	-0.25	0.59

Note: * = p<0.05

Source: SAS output

The respondents' attitudes towards a partner's nationality are also significantly different according to respondents' marital status, nationality, and education. At the same time, it must be highlighted that the urban and rural respondents mostly gave the same answers. Table 26 represents the effect of marital status on respondents' opinions regarding their partners' nationality. The statistically different attitudes were obtained between women who belong to the nuclear families and women living in cohabitation.

Tab. 26 – Effects of marital status on the attitudes towards a partner's nationality

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
In cohabitation and Single mother	0.36	-0.08	0.80
In cohabitation and Nuclear family	0.51*	0.08	0.95
Single mother and Nuclear family	0.15	-0.10	0.40

Note: * = p<0.05

Source: SAS output

The respondents' nationality also has impact on respondents' attitudes towards their partner' nationality. The Kazakh women have statistically different attitudes in comparison with the Russians and women who belong to the group of Other nationalities (Table 27). The differences in attitudes towards a partner's nationality are statistically significant between Kazakh and Russian women and also between Kazakh women and women who belong to Other nationalities. While the differences in attitudes towards a partner's nationality between Russian women and women of Other nationalities are not significant.

Tab. 27 – Effects of nationality on the attitudes towards a partner's nationality

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Russian and Other	0.21	-0.49	0.90
Russian and Kazakh	0.97*	0.75	1.20
Other and Kazakh	0.77*	0.08	1.46

Note: * = p<0.05

Source: SAS output

Tab. 28 – Effects of education on the attitudes towards a partner's nationality

Group comparison of categories by education	**Difference between means**	**Simultaneous 95 % confidence limits**	
Vocational and Basic	0.15	-0.75	1.04
Vocational and Higher	0.59	-0.25	1.43
Basic and Higher	0.44*	0.06	0.82

Note: * = p<0.05

Source: SAS output

Table 28 presents the effect of education on the differences in respondents' attitudes towards a partner's nationality. The main differences occurred between respondents with higher and basic education; the

opinions regarding a partner's nationality of women with vocational education are not different from women with higher and basic educational levels.

Table 29 shows the results of the Tukey studentized range comparison of means between groups of respondents stratified by marital status. The effect of current marital status on the planning of the future marital status change divided the respondents into two groups: the first group consists of nuclear families; the second includes single mothers and women living in cohabitation. The differences in plans regarding the future marital statuses between single mothers and mothers in cohabitation are not statistically significant.

Tab. 29 – Effects of current marital status on the planning of the future marital status change

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Nuclear family and Single mother	1.08*	0.81	1.35
Nuclear family and In cohabitation	1.23*	0.76	1.71
Single mother and In cohabitation	0.15	-0.32	0.63

Note: * = p<0.05

Source: SAS output

Table 30 shows the effect of respondents' nationality on the planning of change the current marital status in the future. Accordingly, the significant difference between Kazakh and Russian respondents is clearly observed.

Tab. 30 – Effects of nationality on the planning of the future marital status change

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Russian and Other	0.12	-0.76	1.00
Russian and Kazakh	0.45*	0.17	0.74
Other and Kazakh	0.33	-0.54	1.21

Note: * = p<0.05

Source: SAS output

Respondents' attitudes towards marriage are different according to their marital status. Table 31 shows a unique situation when all the differences between groups stratified by marital status are statistically significant. Accordingly, the single mothers, members of nuclear families and women, living in cohabitation have significantly different attitudes towards marriage.

Tab. 31 – Effects of marital status on the attitudes towards marriage

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Nuclear family and Single mother	0.42*	0.23	0.61
Nuclear family and In cohabitation	0.94*	0.61	1.27
Single mother and In cohabitation	0.52*	0.19	0.86

Note: * = p<0.05

Source: SAS output

Moreover, the respondents' attitudes towards divorce are different according to their marital status. Table 32 shows the difference between two groups stratified by marital status: nuclear families and single mothers.

Tab. 32 – Effects of marital status on the attitudes towards divorce

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95 % confidence limits**	
Nuclear family and In cohabitation	0.33	-0.19	0.85
Nuclear family and Single mother	0.49*	0.19	0.79
In cohabitation and Single mother	0.16	-0.36	0.68

Note: * = p<0.05

Source: SAS output

The respondents' attitudes towards divorce also have significant differences by nationality of respondents (Table 33). The differences in opinions concerning divorce lie between Russian and Kazakh women.

Tab. 33 – Effects of nationality on the attitudes towards divorce

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95 % confidence limits**	
Kazakh and Russian	0.46*	0.16	0.75
Kazakh and Other	0.51	-0.39	1.40
Russian and Other	0.05	-0.85	0.95

Note: * = p<0.05

Source: SAS output

The respondents' plans to have more children in the future are significantly different according to place of residence (between rural and urban respondents). Additionally, Table 34 shows the differences in plans

regarding the future children according to marital status, which occurred between single mothers and women from nuclear families.

Tab. 34 – Effect of marital status on the planning of having more children in the future

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95% confidence limits**	
Single Mother and In cohabitation	0.11	-0.07	0.30
Single Mother and Nuclear Family	0.21*	0.11	0.32
In cohabitation and Nuclear family	0.10	-0.08	0.28

Note: * = p<0.05

Source: SAS output

The clear difference between opinions regarding affects of absence of a father on a child appeared between single mothers and women from nuclear families (Table 35). At the same time, the effect of marital status on the differences between these groups of respondents and women living in cohabitation is insignificant.

Tab. 35 – Effects of marital status on the attitudes towards affects of absence of father on a child

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95% confidence limits**	
Nuclear family and In cohabitation	0.12	-0.20	0.44
Nuclear family and Single mother	0.43*	0.25	0.61
In cohabitation and Single mother	0.31	-0.01	0.63

Note: * = p<0.05

Source: SAS output

Table 36 also reveals effect of nationality on the respondents' differences in attitudes towards affects of absence of a father on a child. The statistically significant difference appeared between Kazakh and Russian respondents, while the opinions of women who belong to Other nationalities are not significantly different.

Tab. 36 – Effect of nationality on the attitudes towards affects of absence of father on a child

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95% confidence limits**	
Kazakh and Russian	0.20*	0.02	0.38
Kazakh and Other	0.21	-0.35	0.77
Russian and Other	0.01	-0.55	0.57

Note: * = p<0.05

Source: SAS output

Respondents' employment status depends on their marital status. This variable is also significantly different according to respondents' place of residence. According to the Table 37 the largest differences in employment status were found between women living in cohabitation and single mothers. The differences in employment status between women living in cohabitation and members of nuclear families are also significant. At the same time, the differences between employment status of women from nuclear families and single mothers are not statistically significant.

Tab. 37 – Effect of marital status on the employment status of respondents

Group comparison of categories by marital status	**Difference between means**	**Simultaneous 95% confidence limits**	
In cohabitation and Nuclear family	1.49*	0.29	2.68
In cohabitation and Single mother	1.63*	0.44	2.83
Nuclear family and Single mother	0.15	-0.54	0.84

Note: * = p<0.05

Source: SAS output

The respondents' employment status is different according to their nationalities and educational levels. Table 38 shows the difference between employment of Kazakh and Russian women, while Table 39 presents the differences between higher educated respondents and respondents with the basic education.

Tab. 38 – Effect of nationality on the employment status of respondents

Group comparison of categories by nationality	**Difference between means**	**Simultaneous 95% confidence limits**	
Russian and Other	0.04	-2.02	2.09
Russian and Kazakh	1.14*	0.48	1.80
Other and Kazakh	1.10	-0.94	3.15

Note: * = p<0.05

Source: SAS output

Tab. 39 – Effect of education on the employment status of respondents

Group comparison of categories by education	**Difference between means**	**Simultaneous 95% confidence limits**	
Basic and Vocational	0.74	-1.70	3.18
Basic and Higher	1.78*	0.74	2.81
Vocational and Higher	1.04	-1.25	3.33

Note: * = $p<0.05$

Source: SAS output

Accordingly, the ANOVA test was used in order to test the differences between groups of respondents and to examine the impact of respondents' marital status, nationality, education and place of residence on the differences in their number of children, employment status, attitudes towards marriage, divorce and etc. The majority of differences were found between the groups of respondents stratified by marital status. The respondents' marital status affects on women's number of children, attitudes towards marriage, family, divorce, a partner's nationality, plans to have more children in the future, planning of future marital status and etc. These differences were mostly located between nuclear families and single mothers, while group of women living in cohabitation were between those two groups, or combined with one of them. The differences between the groups of respondents stratified by nationality were mostly observed between Kazakh and Russian ethnic groups. The respondent's nationality has impact on the women's number of children, religiousness, attitudes towards divorce and etc. The differences between the urban and rural population is not as big as the differences by marital status. However, the set of variables reveal significant differences between respondents by place of residence, such as: plans to have more children in the future and plans related to the change of current marital status, respondents' religiousness and opinions regarding childcare duties in a family. The differences according to educational level are the most insignificant out of all other variables. However, in some extend the statistically significant differences in respondents' employment status, the level of religiousness and attitudes towards a partner's nationality were found only between women with basic education and higher educated respondents.

Chapter 4

Comparative analysis of survey results

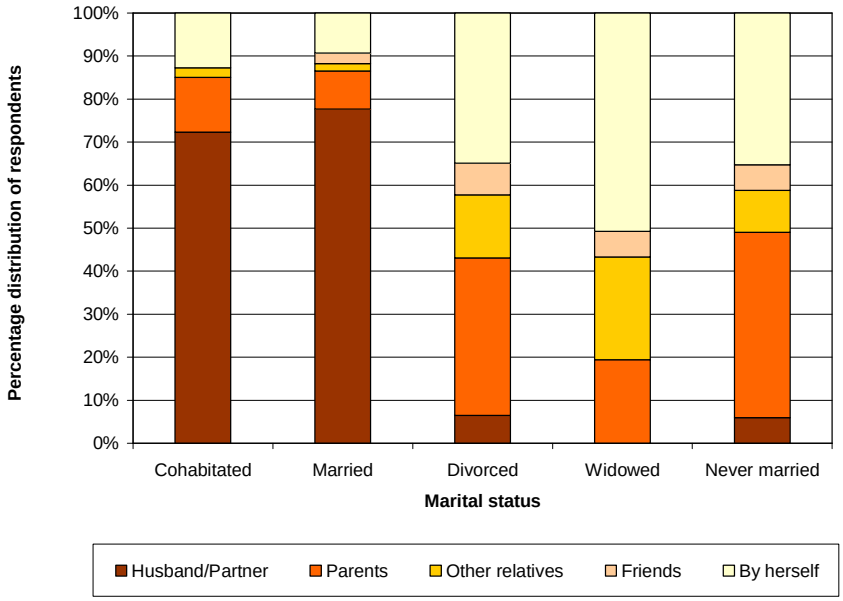
This chapter is aimed to analyze women's characteristics, such as: attitudes towards family, religion, family formation and dissolution and fertility according to their age, nationality and marital status. The comparative analysis is based on the description of survey results. Aforementioned, the majority of significant differences between respondents occurred according to their marital status and nationality. While the differences between groups of respondents, stratified by place of resident and educational level are less significant. Accordingly, the comparative analysis is aimed to highlight the most important respondents' characteristics for the further analysis of trends, related to the diversification of family types in the East-Kazakhstan region.

4.1 Attitudes towards family, religion and a woman's position in society

The role of women in society, the degree of women's emancipation, and women labor force participation could play an important role in family formation, dissolution and childbearing processes. The transformation of families could have occurred through the transformation of people, mainly women. The changes in women's economic, psychological characteristics and position in a family could not be measured, but could be evaluated by correlation with other measures. The next step of the comparative analysis is to introduce the descriptive findings regarding respondents' attitudes towards family, work and the position of women in society. Figure 15 demonstrates the distribution of respondents' answers by their marital status to the question related to the main sources of help in solving problems. More than 70 % of married women and women who have a partner are awaiting a help from their husbands or partners. It is surprising, that approximately 5 % of divorced women are still waiting for help from their ex-husbands. Whilst a half of widowed mothers (51 %) will solve the problem by themselves, while the other 19 % of widowed women will ask for help from their parents. The percentage of independent women is high among widowed, divorced and never married mothers, while married women and women living in cohabitation prefer to ask for help from their partners. The percentage of women who are waiting

for help from other relatives (siblings, uncles, aunts) is higher among widowed mothers (more than 20 %), divorced mothers (almost 20 %), and never married mothers (almost 10 %).

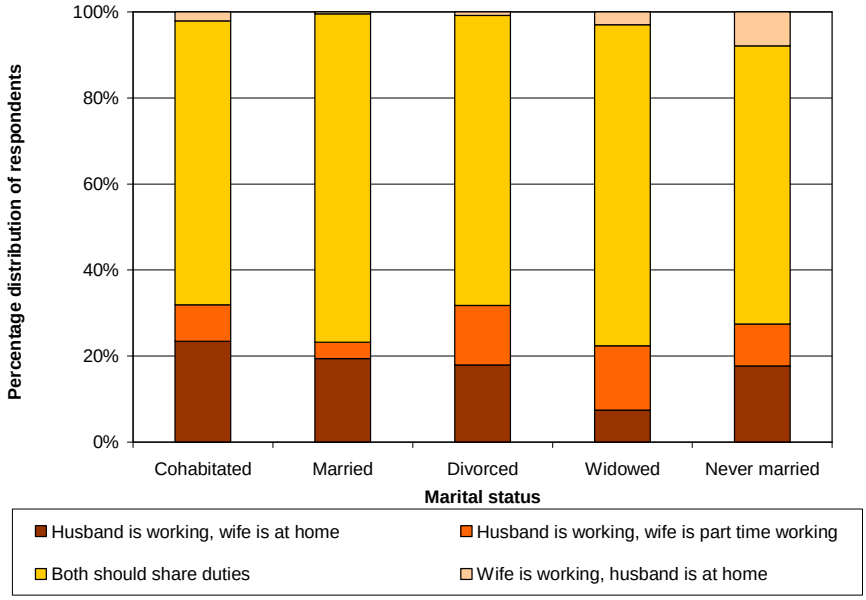
Fig. 15 – Percentage of answers concerning the source of help in solving problems by marital status



Note: Question: Who usually helps you to solve problems?

Source: Family transformation survey, 2008

Fig. 16 – Attitudes towards sharing duties in a household by marital status

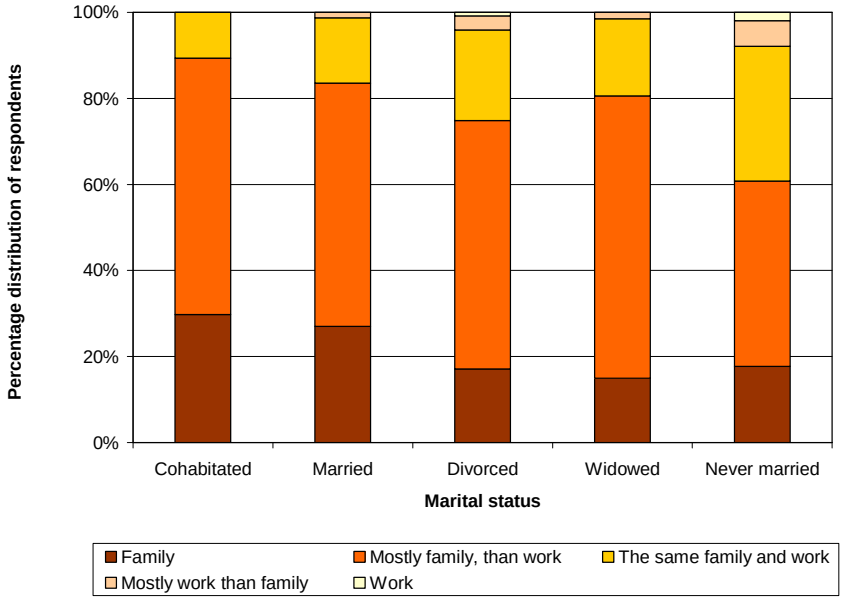


Note: Question: How are the duties in your family distributed?

Source: Family transformation survey, 2008

Figure 16 demonstrates the distribution of respondents by marital status and attitudes towards sharing duties between a husband and wife in a household. According to Figure 16 a relatively small part of women have chosen "traditional" categories of answers, where it was assumed that the husband is breadwinner, and the wife is staying at home or working part time. At the same time, insignificant proportion of respondents chose a radically opposite point of view, where it was assumed that the wife is working, while the husband is staying at home. The absolute majority of respondents have chosen the "modern style", where the wife and husband should share all the duties in a household and keep working. In this case it is interesting to ask women what is important for them: work or family. Figure 17 shows the percentage of respondents according to marital status and vital values. For those women who have partners, family is more important than for lone mothers, who by contrast, consider work as the most important thing. Another important issue is opinions about the child care process, and the main question is who should look after the children. Figure 18 demonstrates the distribution of the answers according to respondents' marital status. Despite the fact that almost half of the divorced women think that only mothers should look after the children, which is possibly affected by a negative experience in marriage, however, the majority of respondents believe that both parents should share the child care duties. It is surprising, that almost 10 % of mothers living in cohabitation think that child care facilities (kindergartens and schools) should be responsible for their children. Only divorced, widowed and never married mothers are turning to grandparents in bringing up their children.

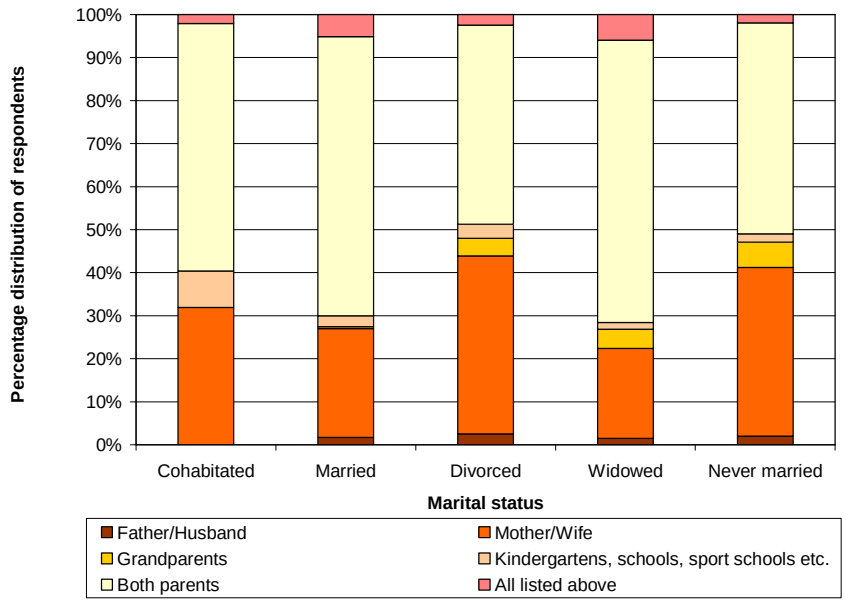
Fig. 17 – Opinions about the importance of family by marital status



Note: Question: What is important for you?

Source: Family transformation survey, 2008

Fig. 18 – Attitudes towards the child care process by marital status

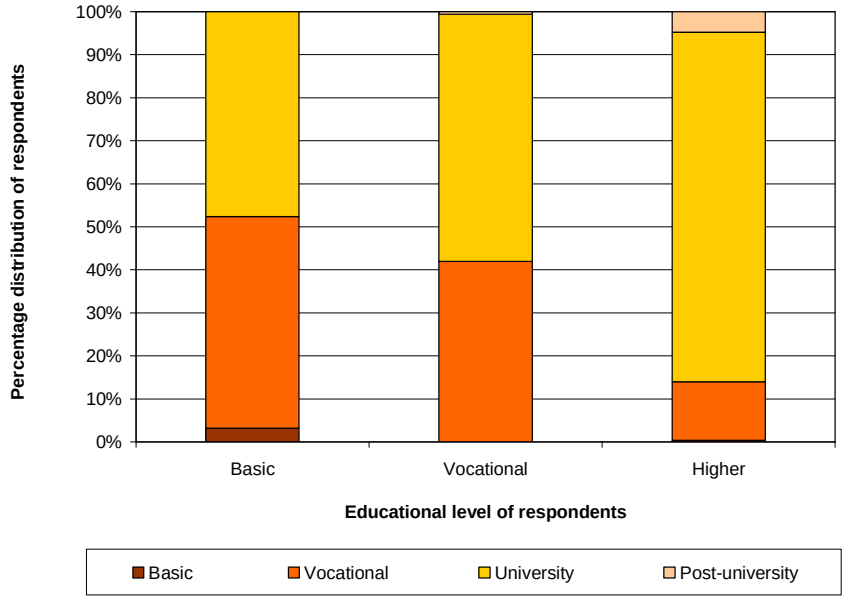


Note: Question: Who must deal with childcare duties in a family?

Source: Family transformation survey, 2008

An opinion on educational level which is enough for males and females in society could show readiness of women to play central role in economic, social and political life of the country, as well as to get high paid job and to be independent from males.

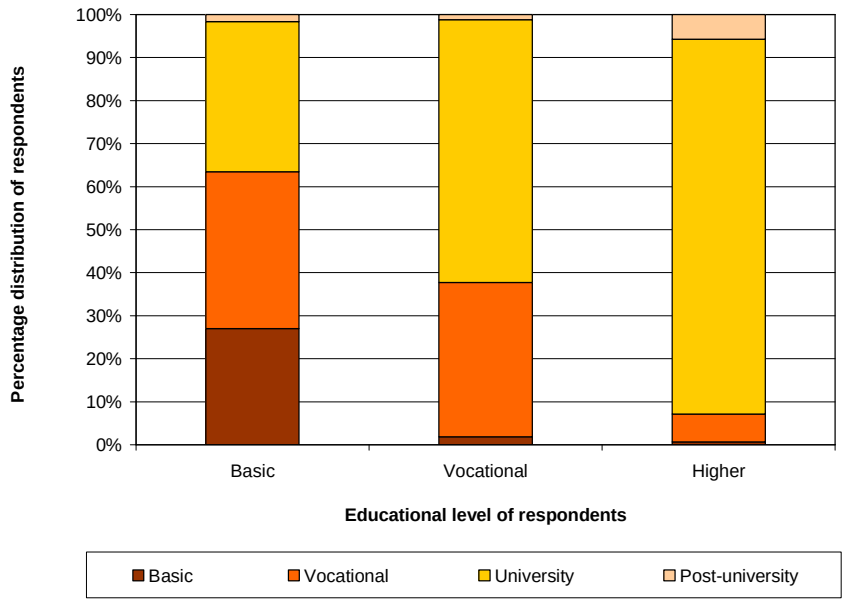
Fig. 19 – Desired level of education for males by respondents' level of education



Note: Question: In your opinion, what level of education is suitable for males?

Source: Family transformation survey, 2008

Fig. 20 – Desired level of education for females by respondents' level of education



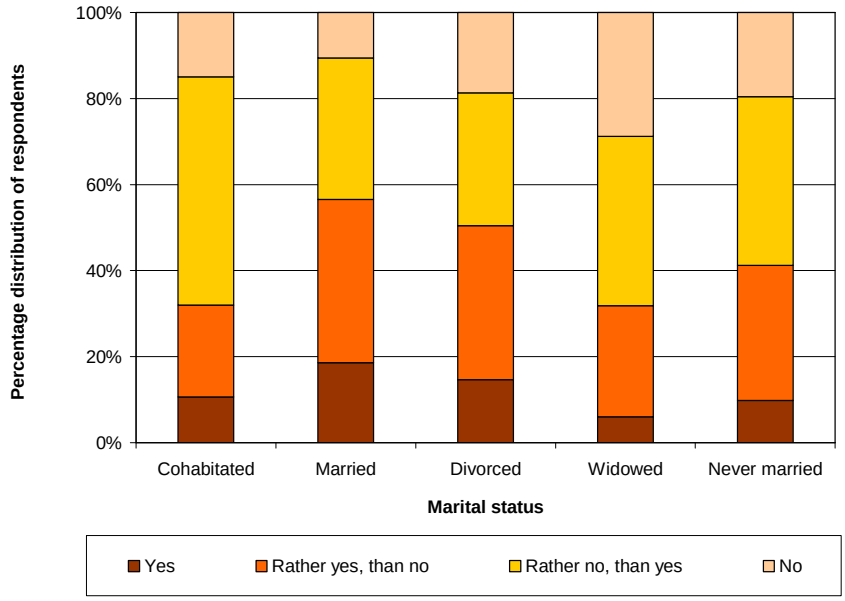
Note: Question: In your opinion, what level of education is suitable for females?

Source: Family transformation survey, 2008

Figure 19 shows the distribution of answers according to the educational level of respondents. Approximately half of the women with basic education think that vocational education is enough for males in current Kazakhstani reality, while another 42 % of women with basic education believe that males should be higher educated. And only 3 % of women with basic education think that basic education is enough for males. The situation is changing when women deal with female education. Approximately 27 % of women with basic education believe that this level is enough for females, while contrastingly, almost the same number of women with basic education (35 %), which is less in comparison with opinions about males' education, note the need to get vocational and higher educations. The majority of women with vocational education (35 %) also think that males should have vocational education, and 57 % of them prefer males to be higher educated. Surprisingly, almost 2 % of women with vocational education believe that basic education is enough for females. The distribution of remaining answers given by respondents with vocational education regarding the level of education for females is approximately the same as for males. The majority of higher educated women (81 %) believe that males should also be higher educated, moreover another 14 % think that males can survive in society with vocational education. The percentage of higher educated women, who think that this level is suitable for females, is higher (87 %), and a percentage of those who prefer the situation when women are less educated is lower (6 %). The degree of religiosity is an influential factor in encouraging acceptance or denying new rules in a modern society. In connection with this, the respondents' religiosity as one of the influential factors in changing of their life styles was analyzed. The East-Kazakhstan region is a multi-ethnic and multi-religious region. However, there are two main religions: Muslim and Orthodox Christianity. The absence of religion in the former Soviet period and the propaganda of scientific communism and special materialistic ideology, had impact on the transition of religion. Due to the historical past, religion has

changed, and has become more like belonging to a certain group (as nationality), rather than religion in the conventional sense. Figure 21 demonstrates the percentage of respondents according to the degree of religiousness and marital status. The highest share of strong believers is among married women, it is less among the divorced, never married mothers and women living in cohabitation, while the minimal percentage of those who positioned themselves as religious is among widowed women. The highest percentage of vacillating respondents, who answered rather religious than no, rather not believer than yes, is among women living with partners in cohabitation. The percentage of answers with positive answers (yes, rather yes, than no) is higher among married and divorced women (more than 50 %). The biggest share of nonbelievers is among widowed women (28 %), less among divorced (19 %) and never married (20 %), and minimal among married women (only 10 %).

Fig. 21 – Religiousness of respondents by marital status

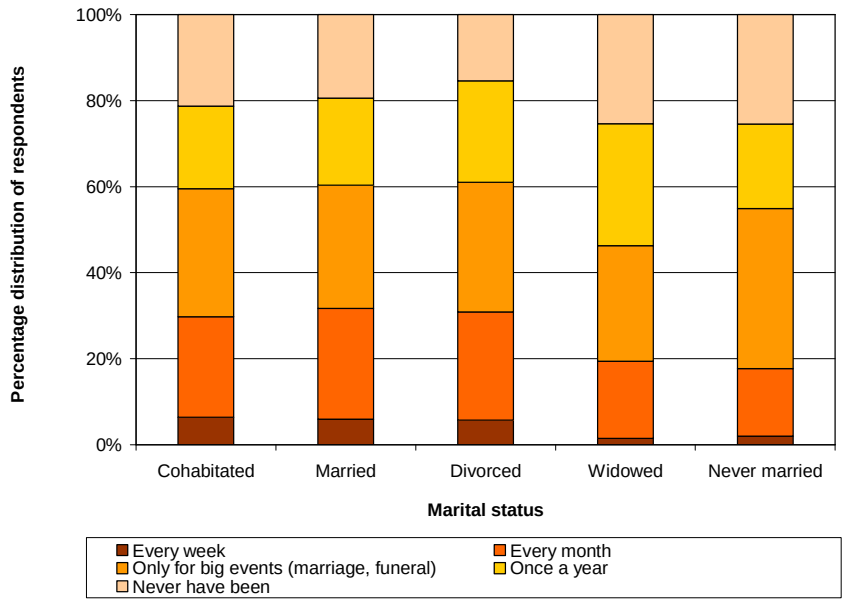


Note: Question: Are you religious?

Source: Family transformation survey, 2008

Figure 22 shows the distribution of respondents according to the frequency of visits to a mosque, temple or synagogue and is coined with the respondents' marital status. The frequency of visits to sacred places reveals the "real believers" and those who just positioned themselves as a believer among the respondents. The percentage of those who visit a mosque and temple every week is very low, the lowest value being 1 % (widowed women), the highest is 6 % (women living with partner in cohabitation). The share of respondents that visit a mosque and temple every month is higher for married and divorced women (both 25 %). The percentage of women who visit a mosque and temple only for big events, such as marriage or funeral is higher among widowed (28 %) and divorced (23 %) women. The percentage of those who never have been to these places is high among widowed and never married mothers (more than 20 %), women living with partner and husband (almost 20 %).

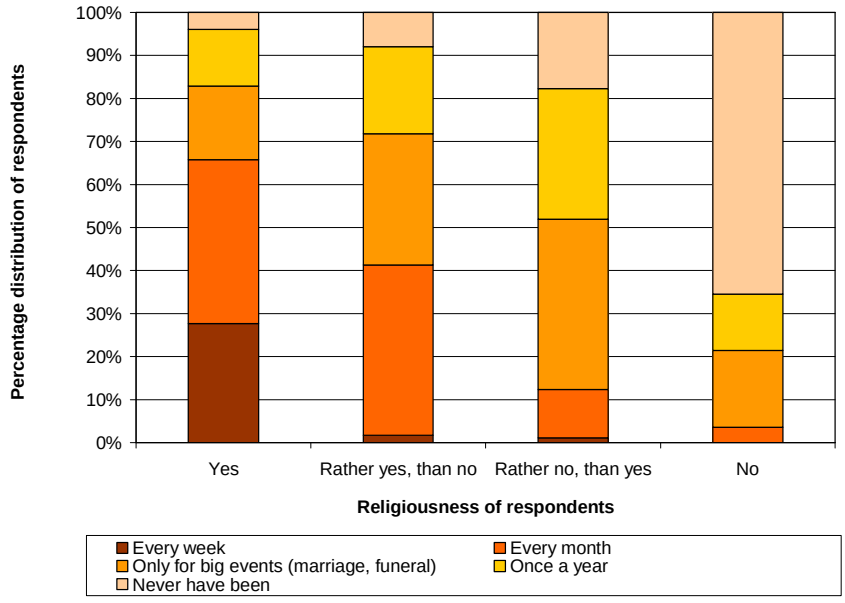
Fig. 22 – Frequency of respondents' visits to sacred places by marital status



Note: Question: How often do you visit mosque, church or synagogue?

Source: Family transformation survey, 2008

Fig. 23 – Frequency of respondents' visits to sacred places by their religiousness



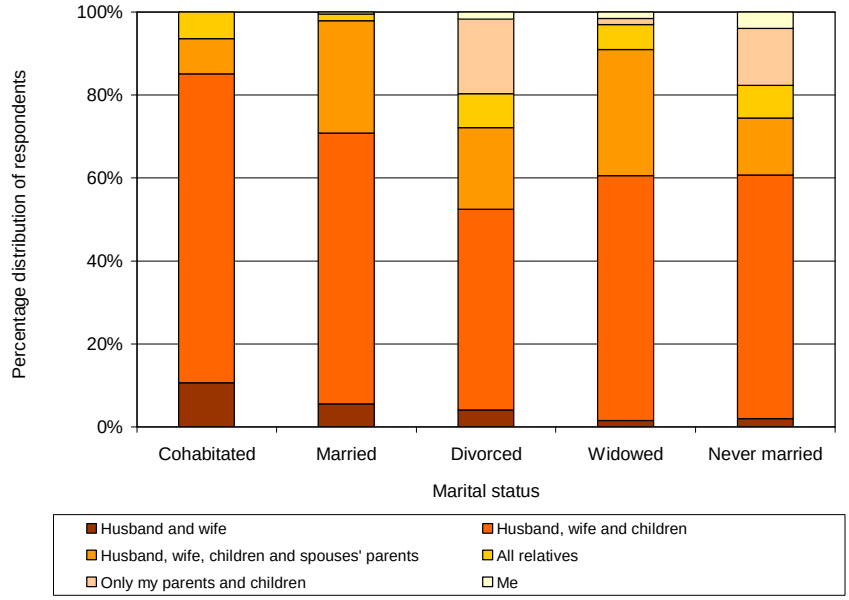
Note: Question: How often do you visit mosque, church or synagogue?

Source: Family transformation survey, 2008

It is important to acknowledge that only 28 % of those who positioned themselves as believers visit a mosque, temple every week (Figure 23). The other 38 % visit such places every month, and 17 % of them visit a mosque and temple only for big events (marriage and funeral). The percentage of those respondents who never have been to sacred places is very high among atheists. Accordingly, the

percentage of "true" believers is low among those who positioned themselves as believers. Conclusively, the religiousness could be considered as a factor which is less influential on marital and fertility behaviors. In order to obtain information on the respondents' opinions and attitudes towards family, and also the components of family, the question related to the definition of family in the respondents' opinion was included. Figure 24 presented the distribution of preferable answers of the respondents. The majority of respondents think that family includes a husband, wife and children. The percentage of married and widowed women who include a husband, wife, children and parents of both spouses into family is higher in comparison with the others. The trend to regard their parents and children as a family is specific only to divorced and never married mothers. The percentage of respondents who think that family consists of only a husband and wife is very low for all marital statuses, however it is relatively higher for women living with a partner in cohabitation.

Fig. 24 – Attitudes towards family by marital status of respondents



Note: Question: In your opinion what is a family?

Source: Family transformation survey, 2008

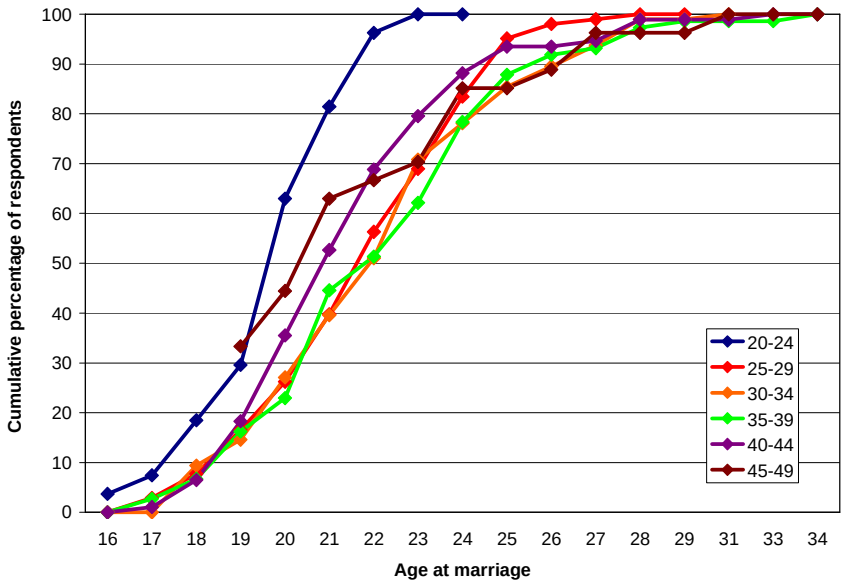
Therefore, the analysis of patterns of women's emancipation was based on additional characteristics including: the woman's position in a family, the preferred style of distribution of duties between a man and woman in a household, the child care process, the prevalence of family or work in a woman's life, the definition of family and the degree of the respondents' religiousness. All of the above listed factors show the heterogeneity of respondents according to marital status. The majority of women have already turned to the emancipated style of life and this could have happened due to specific life circumstances (divorce, separation, widowhood, birth out of wedlock etc.). In contrast, a big proportion of married women are still acting more "traditionally". Of course, this traditionalism is far away from the real traditional way of living of eastern women from Muslim countries. The traditional life style of women from the East-Kazakhstan region mostly comprises the Soviet tradition, which is based on a Kazakh nomadic lifestyle

and a Russian agrarian style of living. In addition, it also includes so called modern style (with strongly marked woman's emancipation). However, the value of a family as union, which consists of a wife, husband and children, is still relevant among the majority of respondents in spite of the presence or absence of a husband or partner. Moreover, women prefer to be higher educated and see educated men in society. At the same time, women's attitudes towards the distribution of duties in a household and in the child care process allow to come to the conclusion, that according to their opinion, females are located in the same position as males in society.

4.2 Family formation

A detailed analysis of the family formation process is a very important condition in the explanation of causality of the family dissolution process in particular, and the family transformation process in general. In other words, without studying the causes of processes it is impossible to study their consequences. Thereby, this part of study is related to a description the respondents' attitudes towards marriage, and factors which could be influential on the formation of family.

Fig. 25 – Cumulative percentage of ever married respondents by age of marriage and age at interview

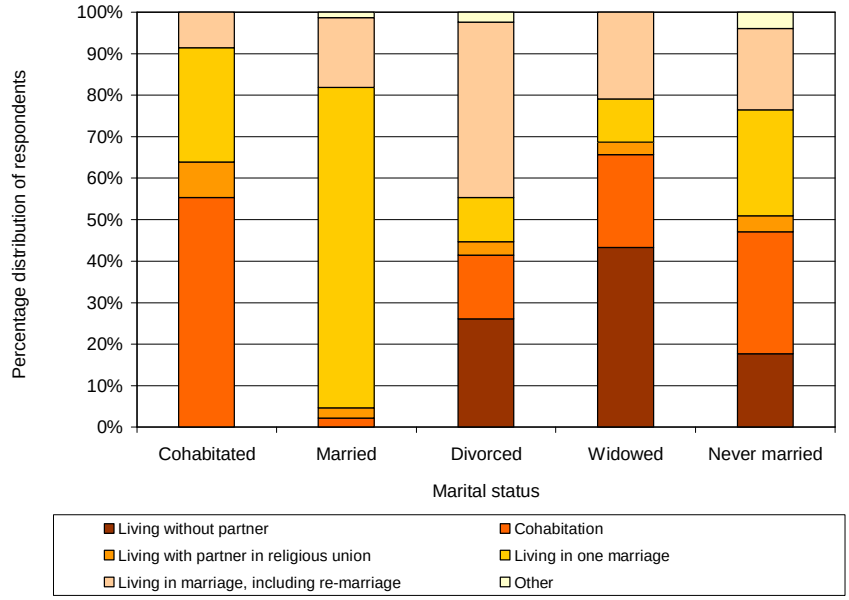


Source: Family transformation survey, 2008

Figure 25 demonstrates the cumulative percentage of ever married respondents according to the age of marriage and their age at the moment of interview. Accordingly, the last respondents, aged 20–24 got married at age 24. The majority of women, who belong to other age groups, finished their process of getting married at 28. According to Figure 26 widowed mothers are more willing to stay without partner (more than 40 %), while divorced (42 %) and never married (almost 20 %) women are planning to remarry again. More than half of the women living with partners in cohabitation (55 %) do not want to

change their status. Almost 77 % of married women hope that they will have one marriage during their entire life. The other 17 % of married mothers characterized their future life as living in marriage, as well as including remarriage. Additionally, 22 % of never married mothers are planning to marry in the future, while almost 30 % of never married women want to live with their partners in cohabitation.

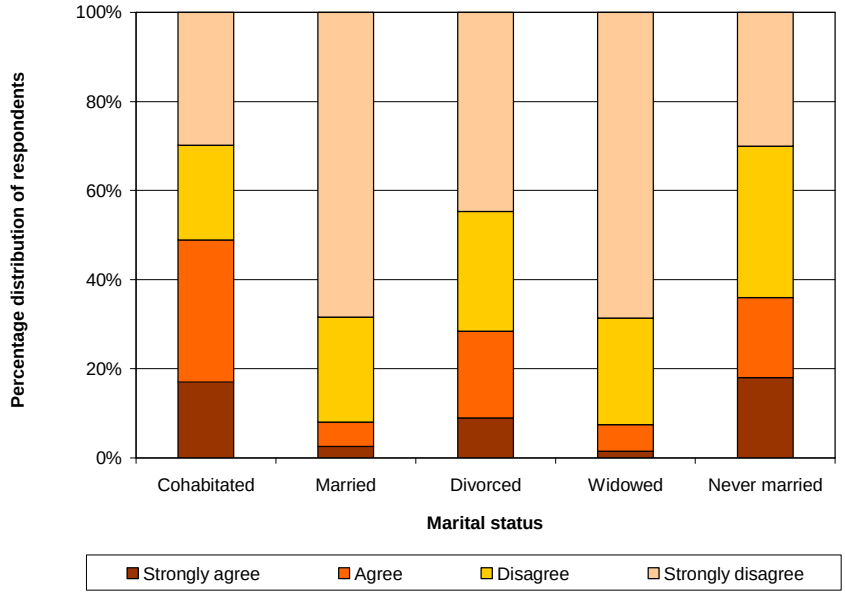
Fig. 26– The percentage distribution of respondents by plans for the future and current marital status



Note: Question: What are you planning in the future?

Source: Family transformation survey, 2008

Fig. 27 – Attitudes towards marriage by marital status

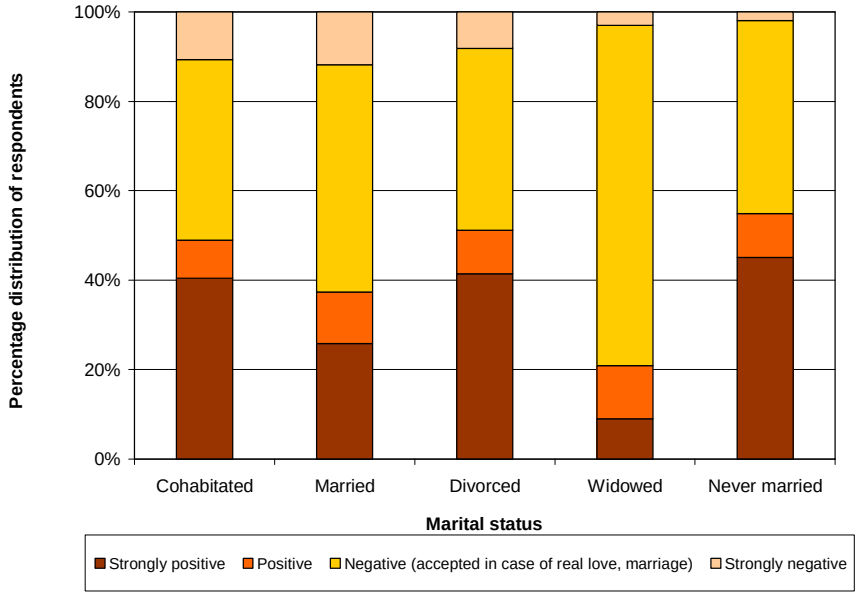


Note: Question: Do you agree that marriage is outdated institution?

Source: Family transformation survey, 2008

Figure 27 shows the distribution of respondents' attitudes towards marriage as outdated and unnecessary institution nowadays. The percentage of respondents who strongly agree that marriage is outdated institution is higher among the never married (18 %) mothers and women in cohabitation (17 %). The percentage of those who strongly disagree is higher among married (68 %), widowed (69 %) and divorced (44 %) women, particularly among those, who experienced marriage in their life time at least once. Significantly, the highest number of those who believe that marriage is outdated and unnecessary nowadays is among women living with partners in cohabitation (49 % in the total with strongly agree and agree). Another half of these women disagree and strongly disagree, which means that they want to change their status and cohabitation is an only intermediate stage in their life.

Fig. 28 – Attitudes toward premarital sexual relationships by marital status



Note: Question: What do you think about premarital sexual relationships?

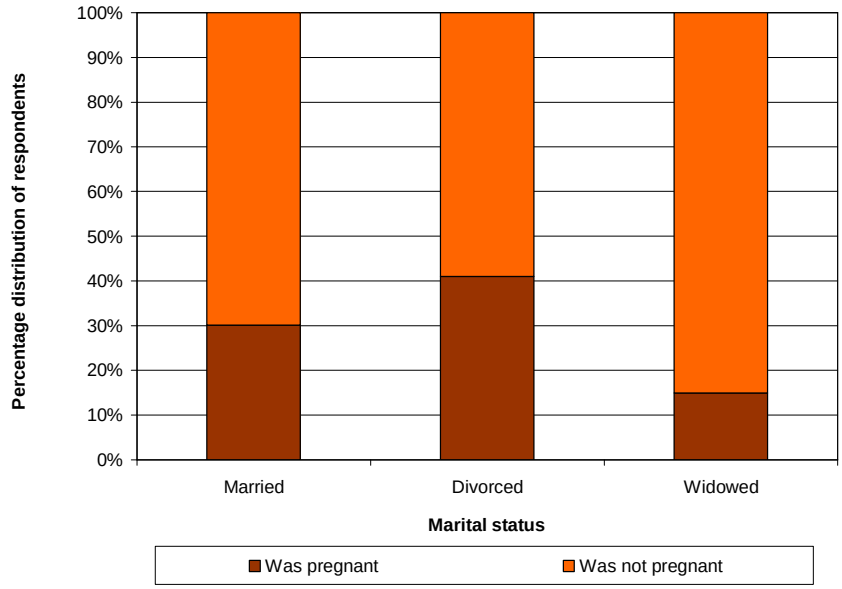
Source: Family transformation survey, 2008

Figure 28 represents the distribution of attitudes towards premarital sexual relationships. According to this, extremely positive answers were given mostly by the never married (45 %) divorced (41 %) females, and women living in cohabitation (40 %). This extremely positive answer is characterized by the view of premarital sexual relationships as a very good opportunity for being more experienced in the future. Such a positive answer was characterized as a loyal attitude, which means a consideration of premarital sexual relationships as a normal physiological thing. Approximately the same number of positive answers was given equally by all respondents regardless of their marital status. The highest percentage of negative answers characterized by a negative attitude towards premarital sexual relationships (it could only be accepted in the case of real love and plans to get married in the close future), was given by widowed (76 %) and married (50 %) mothers. Almost the same number of divorced females and women in cohabitation (both of 40 %) have negative attitudes. It is surprising, that almost 43 % of never married mothers have negative attitudes towards premarital sexual relationships. Seemingly, 43 % of these women who delivered a child out of wedlock regret this experience later on. Moreover, married women and

surprisingly women who live with partners in cohabitation have extremely negative attitudes. It could be argued that this is due to the presence of those who registered their marriage in a mosque, but are still not registered in ZAGS among those who live in cohabitation.

Figure 29 demonstrates the percentage of respondents who were pregnant before marriage. Interestingly, almost half of the divorced respondents were pregnant before marriage. The pregnancy before the marriage could signify that the couple was not ready for the formation of union, and they took this step accidentally. It is obvious that the biggest part of marriages which were formed due to the pregnancy of women usually dissolve in the future. However, almost 30 % of married women and 15 % of widowed females also were pregnant before getting married.

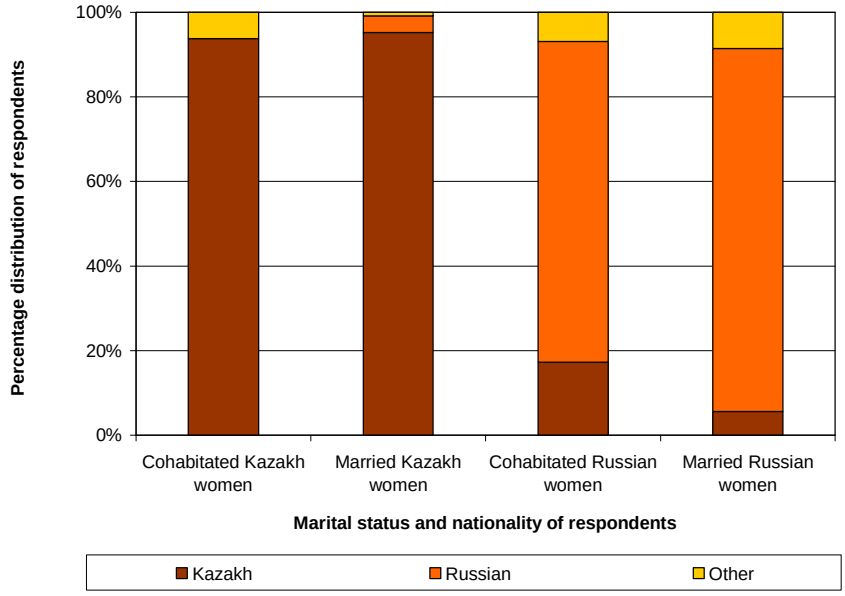
Fig. 29 – Percentage distribution of women, who were pregnant before marriage by marital status



Source: Family transformation survey, 2008

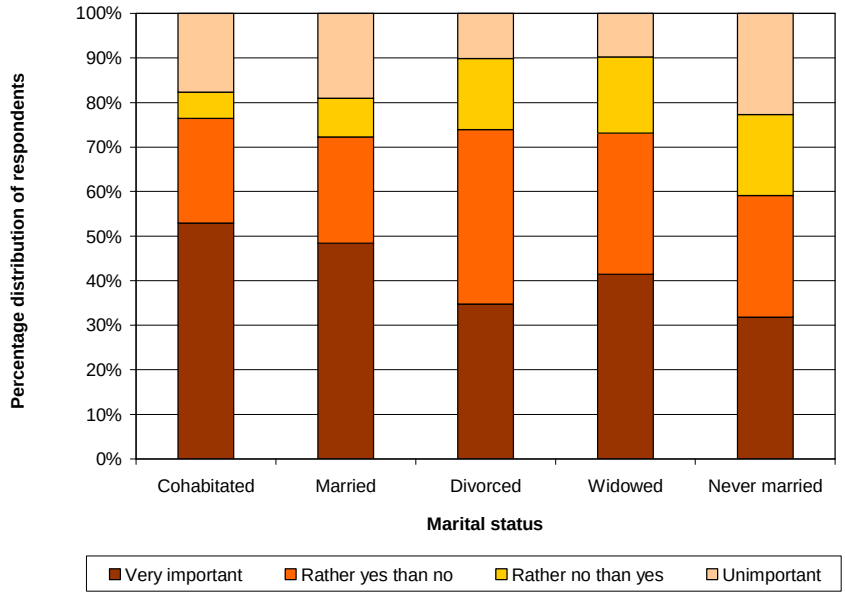
The partner or husband's nationality is also playing an important role in the family dissolution process. According to Figure 30, Kazakh women are more likely to live with a partner or husband of the same nationality regardless of marital status. The majority of Russian women living in cohabitation also prefer partners who belong to the same nationality; however, 17 % of them are living with Kazakh partners and 7 % with partners who belong to another nationality (Tatar, Ukrainian, Germany etc). Among married Russian women the percentage of those who got married with Kazakh men (only 6 %) and men who belong to other nationalities (8 %) is less.

Fig. 30 – Percentage distribution of women by nationality, marital status and partners' nationality



Source: Family transformation survey, 2008

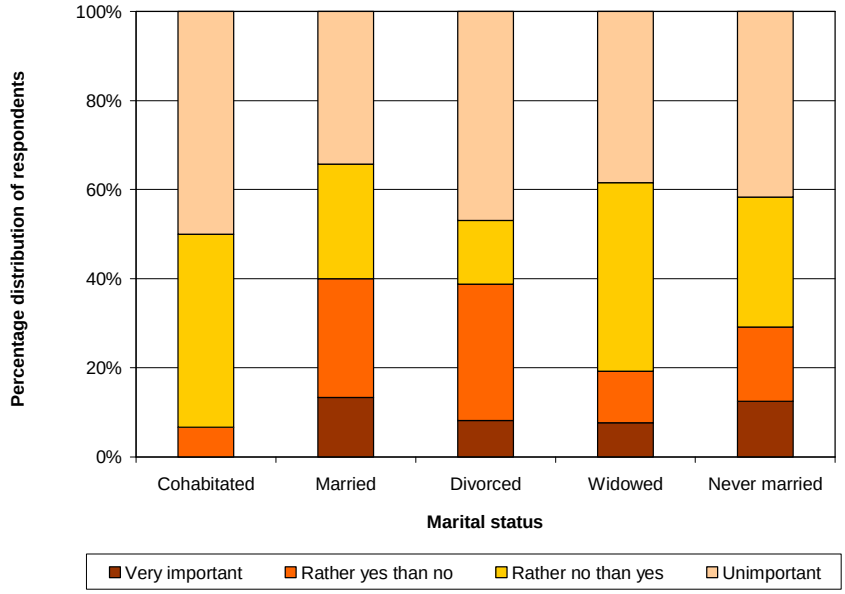
Fig. 31– Percentage of Kazakh women by importance of partners' nationality and marital status



Note: Question: Is your partner's nationality important to you?

Source: Family transformation survey, 2008

Fig. 32 – Percentage of Russian women by importance of partners' nationality and marital status



Note: Question: Is your partner's nationality important to you?

Source: Family transformation survey, 2008

Figures 31 and 32 show the distribution of Kazakh and Russian respondents according to the importance of the partner's nationality by respondents' marital status. It is clear, that for the majority of Kazakh women, the partner's nationality is essential, especially for married women (48 %) and women living in cohabitation (53 %). Only for 34 % of divorced women a partner's nationality is very important, for the other 39 % it is less, but still important. The lowest percentage of those for whom a partner's nationality seems to be very important, is among never married mothers (31 %). Moreover, 21 % of single mothers prefer to give the answer: rather important than not. The percentage of those who think that a partner's nationality is an unimportant thing is very low among Kazakh women. The lowest values belong to divorced (10 %) and widowed (9 %) women, while the highest value is among never married respondents (23 %). Russian women show another trend: the highest number of those who classified the partner's nationality as a very important issue belongs to married (13 %) and never married women (12 %). However, this percentage is lower than for Kazakh women. The number of respondents who think that the partner's nationality is rather important than not is higher among divorced Russians (31 %) and married (26 %) women. For the majority of Russian women, living in cohabitation, the partner's nationality is unimportant (50 %) and rather unimportant (43 %). A large proportion of widowed Russian women show the same trend: for 38 % of them the partner's nationality is unimportant, and for 42 % rather unimportant. It should be noted that the stressing unimportance of the partner's nationality is higher among Russian women, than Kazakhs.

Marriage as a legal union is still relevant not only for married, widowed women, but also for never married, divorced mothers and women that living in cohabitation. Moreover, a desire to live in marriage, even if it is remarriage is very high among East-Kazakhstani women, especially for divorced women.

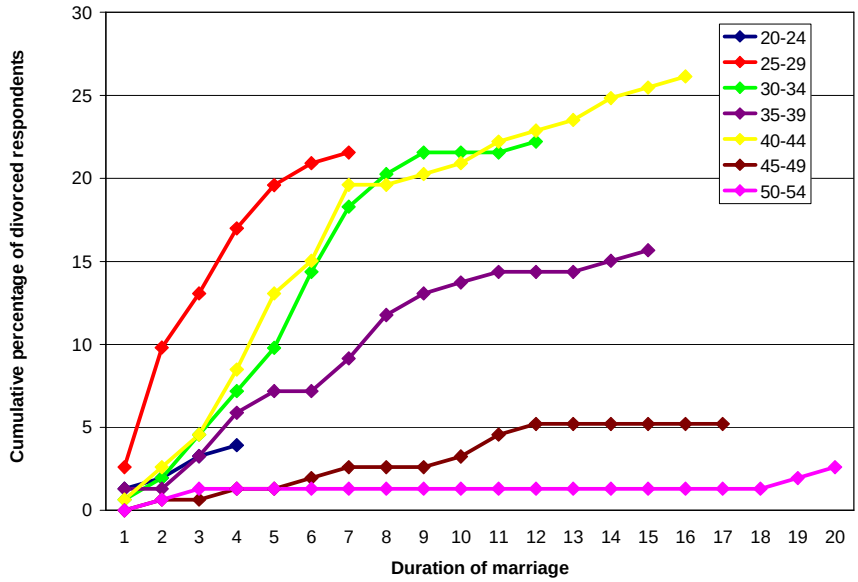
Almost a half of widowed women prefer to stay alone and live without a partner. However, attitudes towards premarital sexual relationships are mostly positive, which is seen in a relatively high number of ever married respondents that have been pregnant before marriage. The nationality of partners is still important for the majority of Kazakh women, while the high number of Russians do not pay attention to this factor. However, married women are less intent on getting married to Kazakh partners in comparison with women, who prefer cohabitation. The conditions of family origin, such as: premarital sexual relationships, pregnancy before marriage, and hetero-national unions could be a crucial factor in the family dissolution process, mainly in divorce.

4.3 Family dissolution

This subchapter is mostly related to one of the main forms of family dissolution – divorce. Divorce and separation unlike the death of one of the spouses, depends on several external factors, related to the surrounding conditions and internal factors depending on the personal qualities and attitudes of spouses.

Figure 33 represents the cumulative percentage of divorced respondents by duration of marriage and age at interview. The respondents aged from 25 to 29 are more willing to dissolve their marriage in a short period of living together, for example 20 % of respondents divorced after 5 years spent in marriage. At the same time, 20 % of respondents who belong to the 40–44 age group divorced after 7 years from the moment of marriage. Respondents aged between 30–34 show the same trend. It is important, that 15 % of the respondents aged between 35–39 dissolved their marriage after 14 years of living together.

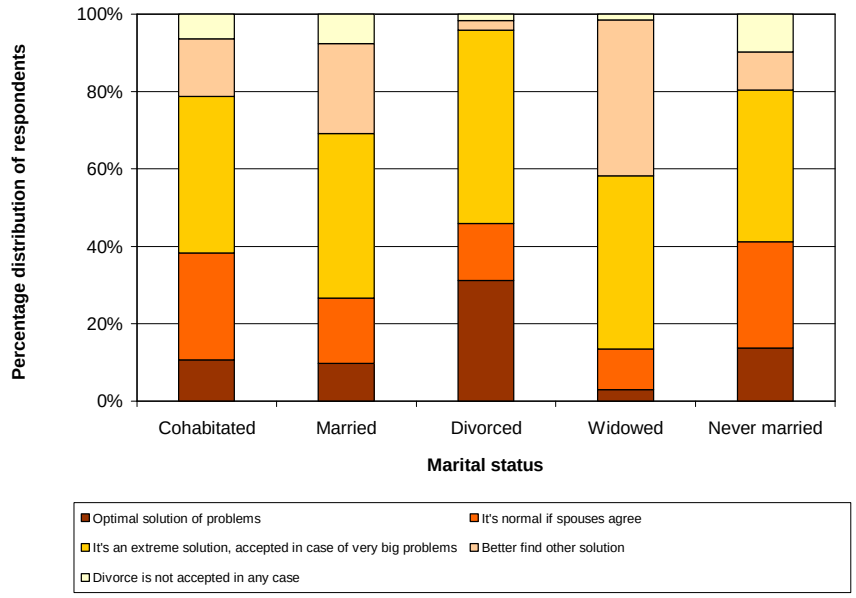
Fig. 33 – Cumulative percentage of divorced respondents by duration of marriage and age at interview



Source: Family transformation survey, 2008

Figure 34 shows attitudes towards divorce according to the marital status of respondents. It is obvious that the majority of divorced respondents in general accept divorce, 30 % of them characterize divorces as the optimal solution of problems, 14 % – as normal if spouses agree, and 50 % of respondents recognized it as an extreme solution, but despite this accepted in the case of irreconcilable contradictions between spouses.

Fig. 34 – Attitudes toward divorce by respondents' marital status



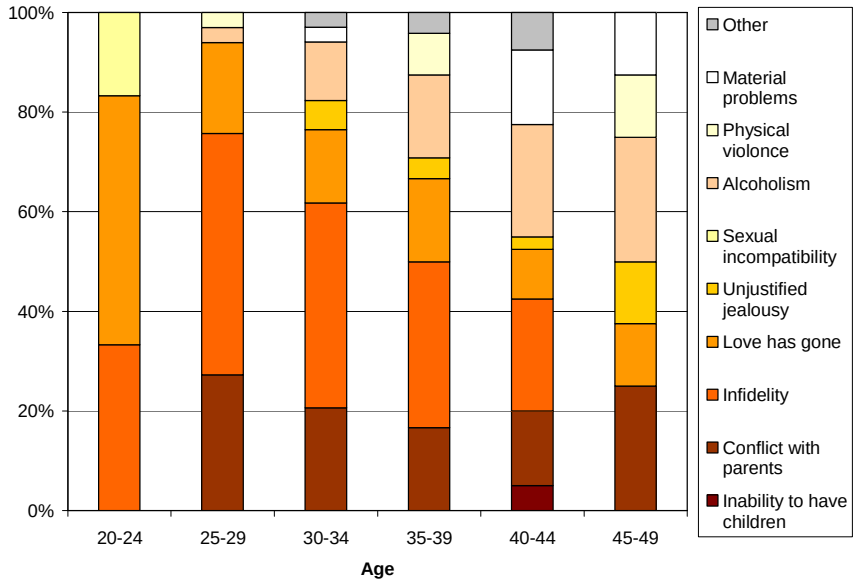
Note: Question: What do you think about divorce?

Source: Family transformation survey, 2008

Almost 40 % of never married women and females in cohabitation have positive attitudes towards divorce and believe that it is an optimal and normal solution. The lowest percentage of those who accept divorce is among widowed and married women. Moreover, 40 % of widowed women believe that in such situations it is better to find another solution than divorce. The same opinion is shared by 23 % of married respondents and 15 % of women in cohabitation. In order to evaluate the degree of influence of external and internal factors of the family dissolution process, the respondents' reasons of divorce should be analyzed.

Figure 35 presents the respondents' reasons for divorce by age profile. Infidelity is one of the most common reasons among all respondents regardless of age differences. Such reasons, as: love has gone and sexual incompatibility, are unique to women of young cohort. While more than 20 % of divorces among women form 25 to 49 are due to conflict with the husband's parents. Unjustified jealousy is an equally reasonable argument for divorce among women at older ages. The number of divorce due to alcoholism is very high among women who belong to older cohorts, mostly at ages 40–49. The percentage of divorces due to material problems and physical violence is not high and common only for older ages.

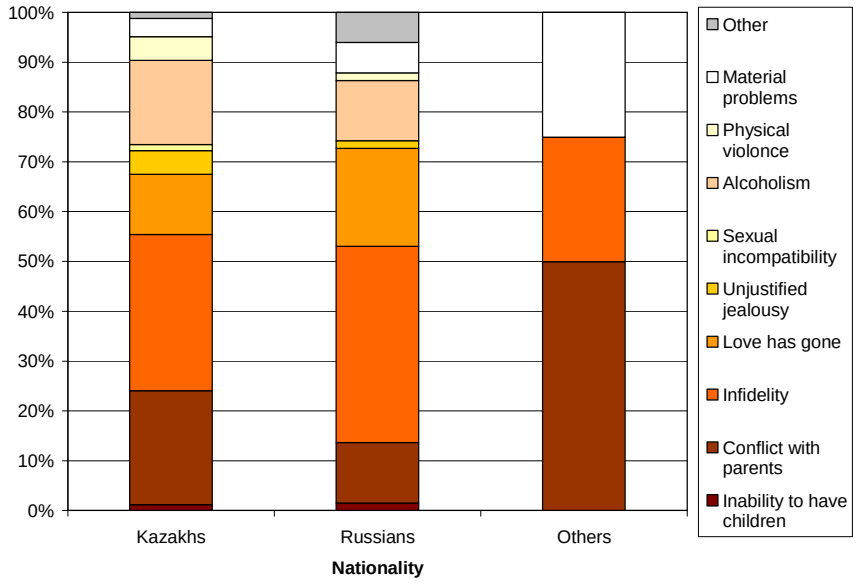
Fig. 35 – Reasons for divorce by respondents' age



Note: Question: What was the reason for your divorce?

Source: Family transformation survey, 2008

Fig. 36 – Reasons for divorce by respondents' nationality



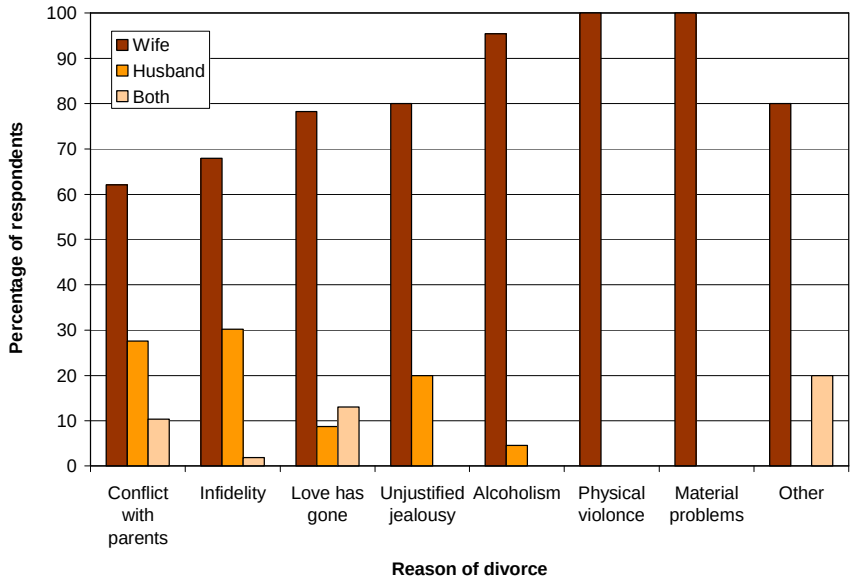
Note: Question: What was the reason for your divorce?

Source: Family transformation survey, 2008

Next Figure 36 shows the distribution of reasons of divorce by nationality. The nationality of the respondents as well as age could be influential in taking the decision to divorce for one reason or another. Kazakh women are more prone to divorce due to conflicts with husband's parents in comparison with Russian respondents. Arguably, this problem has occurred because Kazakh women are more likely to live

in their husband's parental home in the first years of marriage than Russians. The conflict with the husband's parents is also a realistic reason for divorce for other nationalities. Infidelity, unfaithfulness and betrayal are very strong reasons for divorce among 38 % of Russian respondents. Moreover, this reason was mentioned by 31 % of Kazakhs and 33 % of women who belong to the other ethnic groups (Tatars, Ukrainian, German, Altay, and Chechen). Divorce due to the end of love is more common for Russian women (20 %), than Kazakhs (12 %). Meanwhile alcoholism of the husband is more frequent among Kazakhs in comparison with Russians. At the same time, material problems could be the reason for divorce of Russian respondents and respondents of the other ethnic groups.

Fig. 37 – Initiators of divorce by reasons for divorce



Note: Question: Who initiated the divorce?

Source: Family transformation survey, 2008

Additionally, there is another important aspect which should be included into descriptive findings. This aspect might explain when women really wanted to be divorced and made this decision consciously as the initiator of divorce, and when she was divorced by the request of husband. Figure 37 shows the percentage of divorces by the initiator and the reasons for divorce. According to this it is essential that the vast majority of divorce occur at the request of women. Men become the initiator of divorce only when there are problems such as: a conflict with the spouses' parents (28 %), infidelity of the husband (30 %), unjustified jealousy (20 %) and when love has gone (8 %). It is surprising that in the case of alcoholism of the husband, 4 % of males decided to get divorced and initiated the divorce. Both spouses initiate divorce according to mutual agreement when there are conflicts with parents (10 %), infidelity (2 %) and when love has gone (13 %).

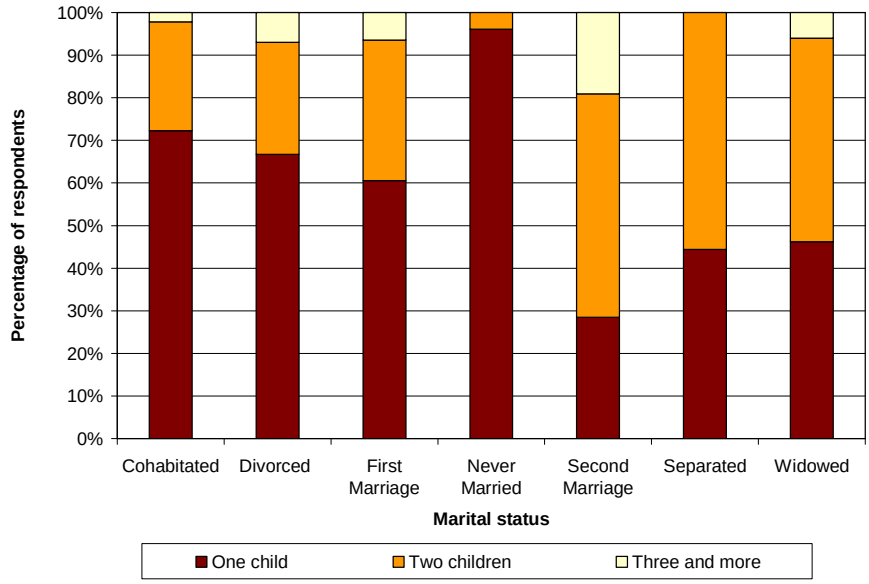
Accordingly, divorce is the most popular solution when spouses cannot solve their problems. Young cohorts decide to divorce in the first few years of marriage, while older respondents divorce after 10 and more years of living in a marriage. The majority of women, regardless of their marital status, are

characterized by positive attitudes towards divorce. The percentage of those who will never accept this kind of solution to the problem is insignificant. Widowed women show more negative attitudes towards divorce, which is clearly explained by the fact that they already lost their husbands and feel sorry for the loss. Young generations are more willing to divorce due to infidelity, loss of love and sexual incompatibility, which can be classified as spiritual or individual problems, while older generations mostly divorce due to conflicts with their husband's parents, infidelity, alcoholism and material problems, which can be characterized as material or "every day" problems. Additionally, the majority of divorces are initiated by women, while males initiated divorces only due to a few reasons: infidelity, conflict with parents and unjustified jealousy.

4.4 Fertility according to marital status

This subchapter aimed to describe the current situation regarding fertility patterns by marital status of respondents. The analysis and conclusions from this subchapter will be used as a basis for further analysis of the role of modern types of families (step-families, single-parent families, partners in cohabitation) in population growth in comparison with traditional types of family (nuclear families, continuously married couples). This part of thesis aimed to analyze the impact of women's marital status on their fertility level.

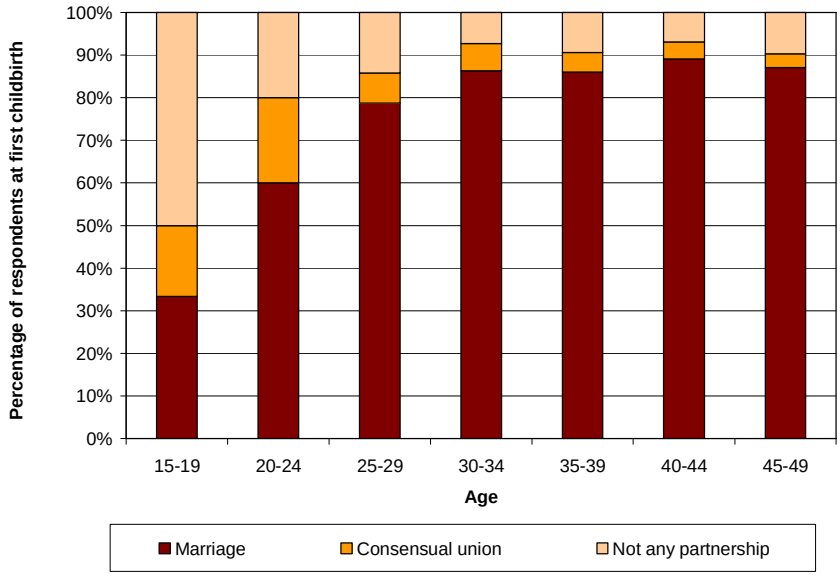
Fig. 38 – Percentage of respondents by number of children and marital status



Source: Family transformation survey, 2008

Figure 38 shows the percentage distribution of respondents according to the number of children and marital status. It is clearly observed that the majority of divorced, never married, first time married women and females living in cohabitation have one child. At the same time a large proportion of separated, widowed, and second time married mothers have two children. The percentage of those who have three children or more is insignificant; the highest value is 19 % for women in the second marriage.

Fig. 39 – Percentage of respondents at first childbirth by age and marital status

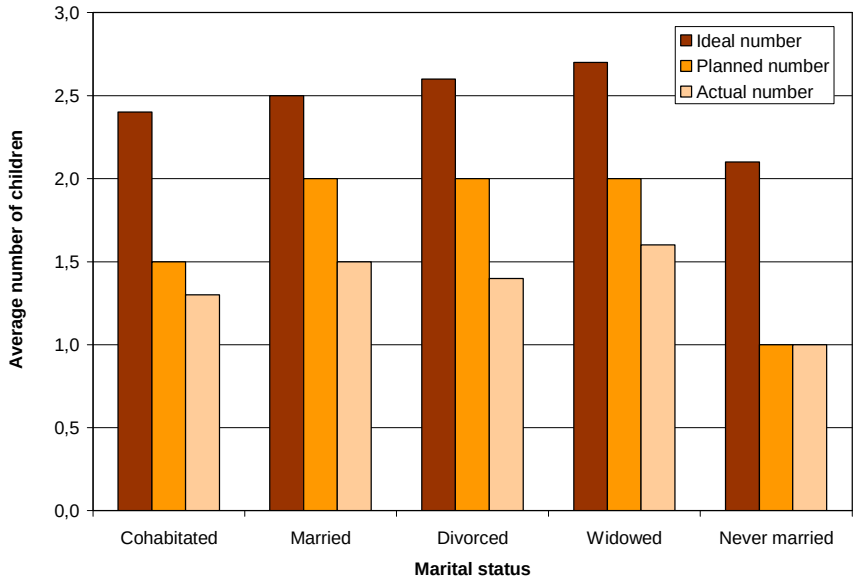


Source: Family transformation survey, 2008

Figure 39 presents the distribution of respondents according to age and marital status at the moment of first childbearing. Approximately 33 % of women of young cohort were married when they delivered their first child; the other 18 % were in cohabitation, the rest were unmarried. The majority of women at older ages at the time of first childbearing were married. The percentage of births in marriage is increasing with age, while number of extra-marital births is decreasing. The percentage of women who delivered their first child out of wedlock at older ages is significantly lower in comparison with the younger generations.

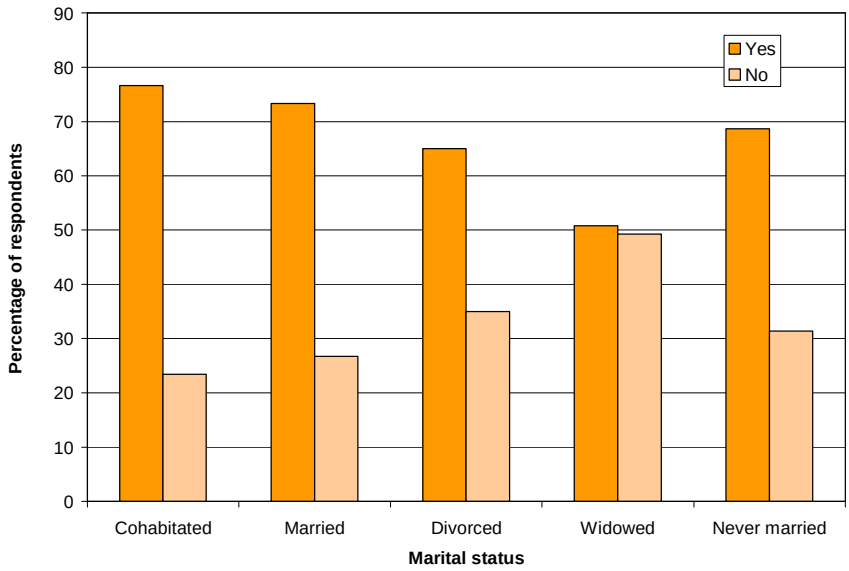
Figure 40 represents the ideal, planned and actual average number of children by marital status. Essentially, that almost all respondents regardless of marital status revealed that the ideal number is more than two children per woman. The planned number of children is also higher than actual (more than 1.5 for all respondents), except with never married mothers. The actual number is lower for all respondents by marital statuses; the exception is again never married women. The gap between the planned and actual number of children is higher for divorced mothers (0.6), married respondents (0.5) and widowed women (0.4). Divorce could be one of the obstacles in the realization of the respondents' plans regarding their desired number of children.

Fig. 40 – Average number of ideal, planned and actual number of children by marital status



Source: Family transformation survey, 2008

Fig. 41 – Respondents' contraception usage by marital status

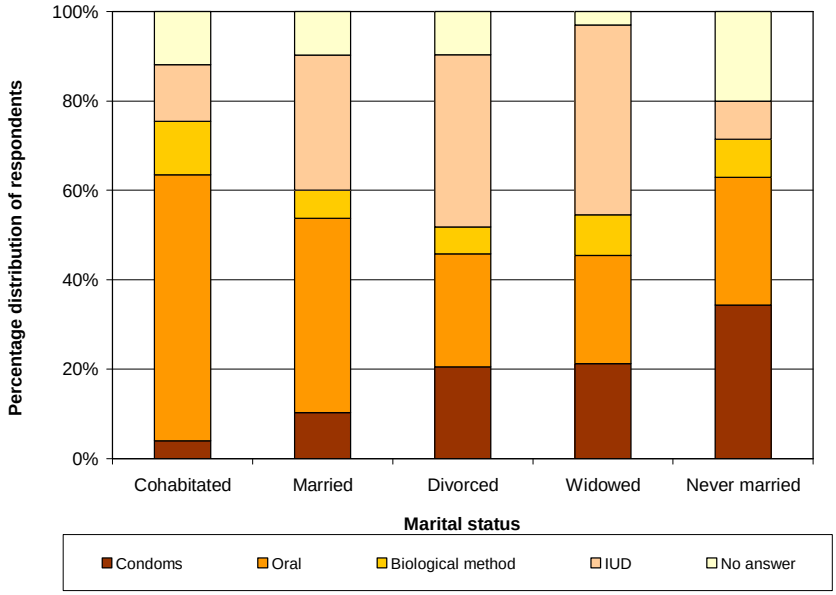


Source: Family transformation survey, 2008

Contraception usage and an active sexual life after the dissolution of marriage also play an important role in the future family planning of respondents. Figure 41 shows the distribution of respondents by contraception usage and marital status. The majority of married women, and women in cohabitation gave a positive answer to a question about the contraception use of respondents. Surprisingly, more than 60 % of divorced and never married women and a half of widowed women are also using contraception. In spite of this, more than 30 % of divorced and never married and almost 50 % of widowed respondents do not use contraception. Figure 42 shows the classification of contraception methods according to marital

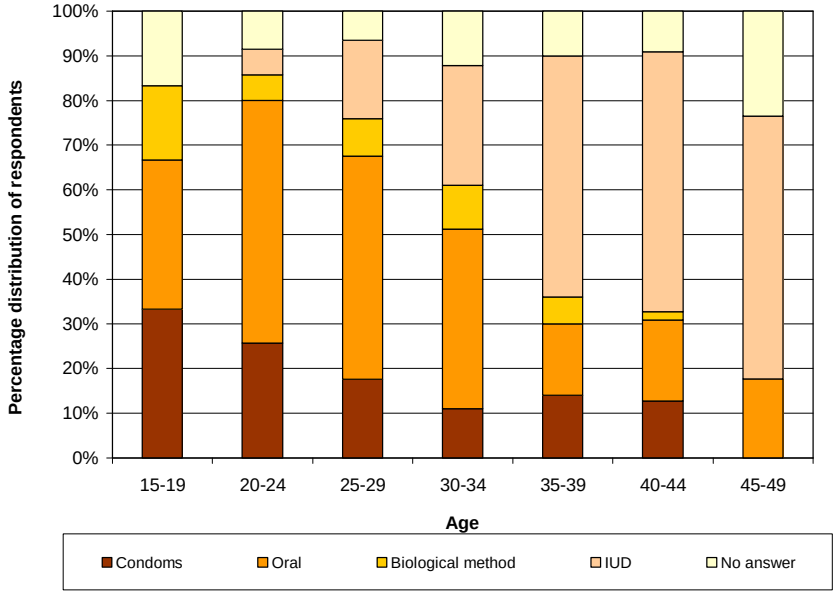
status. The majority of women living in cohabitation (42 %) and married respondents (40 %) prefer oral contraception, while the biggest part of widowed (42 %) and divorced (39 %) women mentioned IUD as a preferable method of contraception. The majority of never married mothers prefer condoms (34 %).

Fig. 42 – Methods of contraception by marital status



Source: Family transformation survey, 2008

Fig. 43 – Methods of contraception by age of respondents



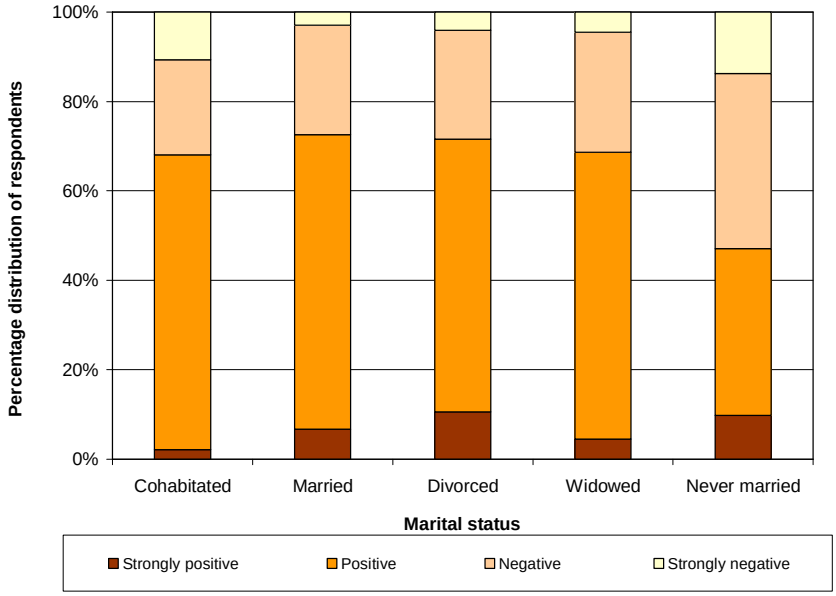
Source: Family transformation survey, 2008

Figure 43 shows the distribution of the respondent's preferable methods of contraception by age profile. The young generation is more intent on using condoms than other kinds of contraception. This could be due to the fact that they do not have a permanent partner and the majority of respondents aged 15–20 are

never married mothers. Despite this, the percentage of those respondents who use oral contraception is very high among the young generation aged from 20 to 34, in comparison with the older generations. These women have a permanent partner or husband. Using IUD is common for older generations, which is related to the Soviet past. In the Soviet period this type of contraception was very popular.

Figure 44 demonstrates attitudes towards abortion. In essence, that the largest proportion of respondents have positive attitudes. The percentage of respondents who hold strong positive attitudes is higher among divorced and never married women. Positive attitudes, when abortion is accepted due to an undesired child is higher for married, divorced, widowed women and respondents living in cohabitation. Positive and strong positive answers altogether are surprisingly low (43 %) for never married mothers in comparison with others. The highest percentage of respondents who gave negative and strongly negative values to abortion is among never married women.

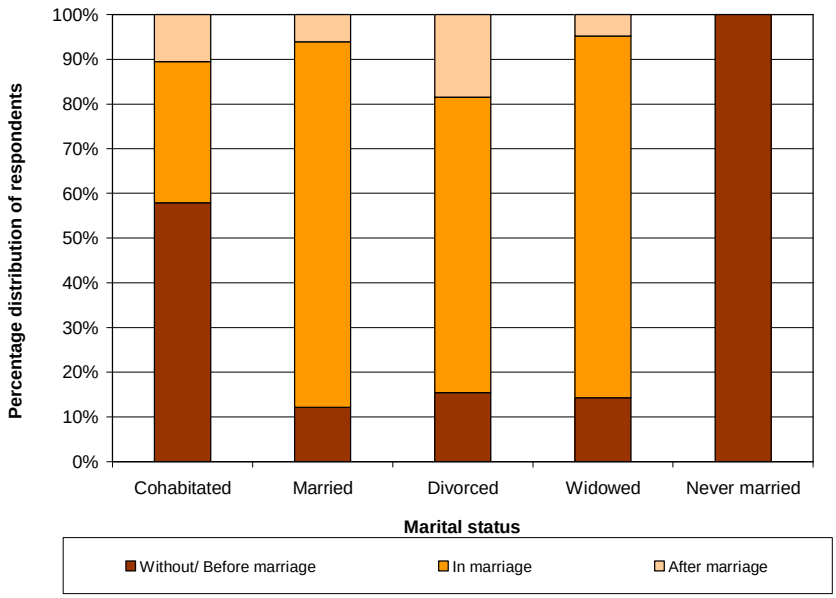
Fig. 44 – Attitudes towards abortion by marital status



Source: Family transformation survey, 2008

The majority of women living in cohabitation experienced induced abortion before or without marriage, while 30 % of them experienced an abortion during marriage, which means those respondents were married before cohabitation, and almost 10 % of women living in consensual unions experienced induced abortion after the dissolution of marriage (Figure 45). The majority of married women experienced an abortion in marriage, while more than 10 % of them had induced abortion before getting married. Less than 10 % of married mothers had an abortion after the dissolution of their first marriage. The highest percentage of those who experienced an abortion after marriage is among divorced respondents (almost 20 %). Widowed women mostly experienced their first abortions in marriage (almost 80 %).

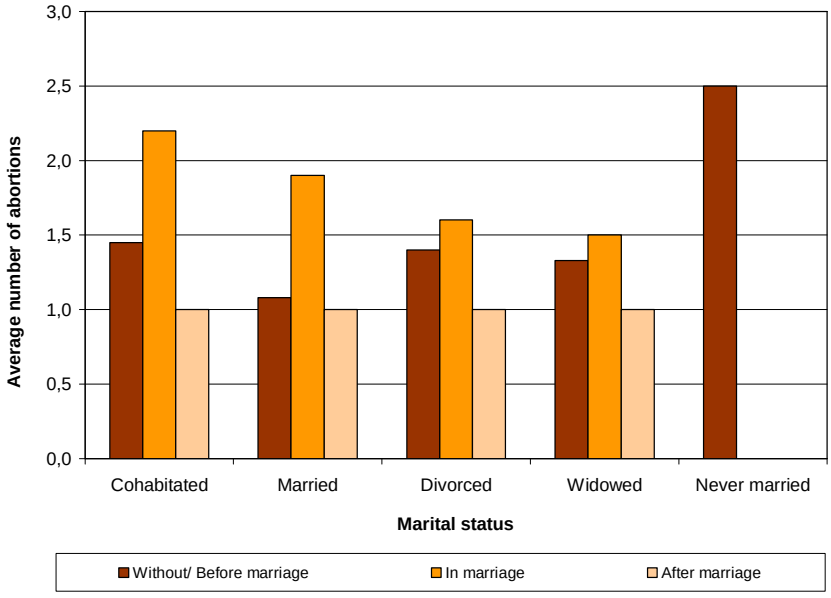
Fig. 45 – The percentage distribution of induced abortions experienced by respondents



Source: Family transformation survey, 2008

Figure 46 shows the average number of induced abortions per woman by marital status at the time of interview and marital status at the time of having an abortion. The highest number of abortions ever executed by respondents before marriage is among the never married (2.5), divorced (1.4), widowed (1.3) and women living in cohabitation (1.4). The average number of induced abortions experienced in marriage is highest for women living in cohabitation, which is more than twice per woman and is lowest for the widowed (1.5). The average number of abortions experienced after marriage is the same for all marital statuses.

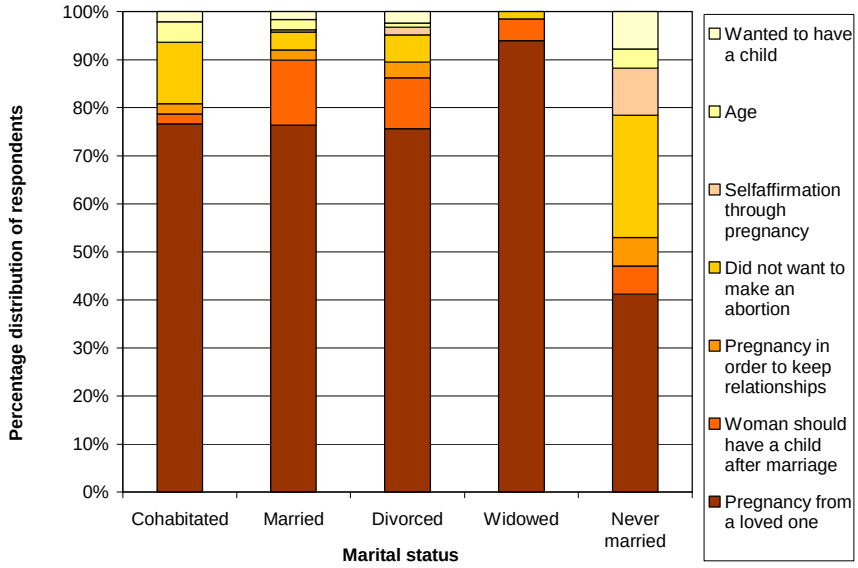
Fig. 46 – The average number of experienced abortions by marital status



Source: Family transformation survey, 2008

Figure 47 demonstrates respondents' main motivations for being pregnant according to their marital status. It is clearly observed that the main motivation for almost all mothers except the never married was pregnancy from a loved one.

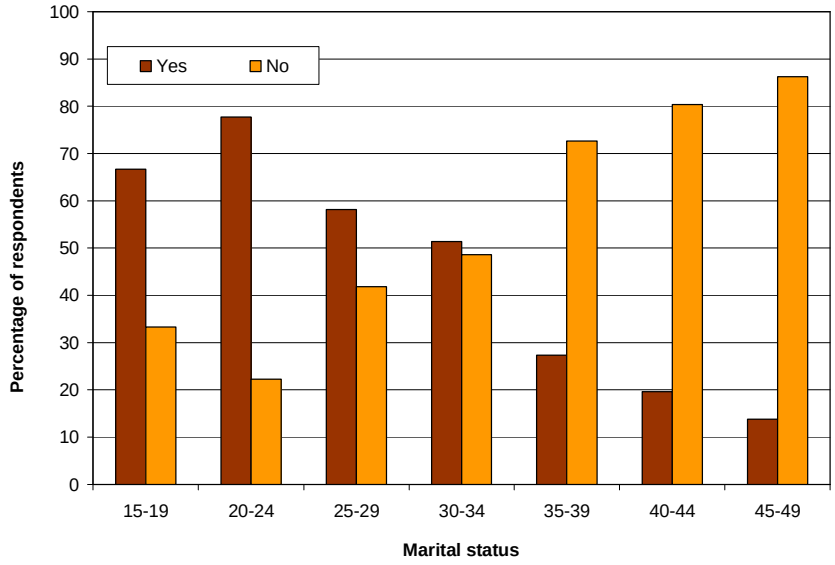
Fig. 47 – The motivations of being pregnant by marital status



Note: Question: What was your motivation to get pregnant?

Source: Family transformation survey, 2008

Fig. 48 – Desire to have one more child in the future by age

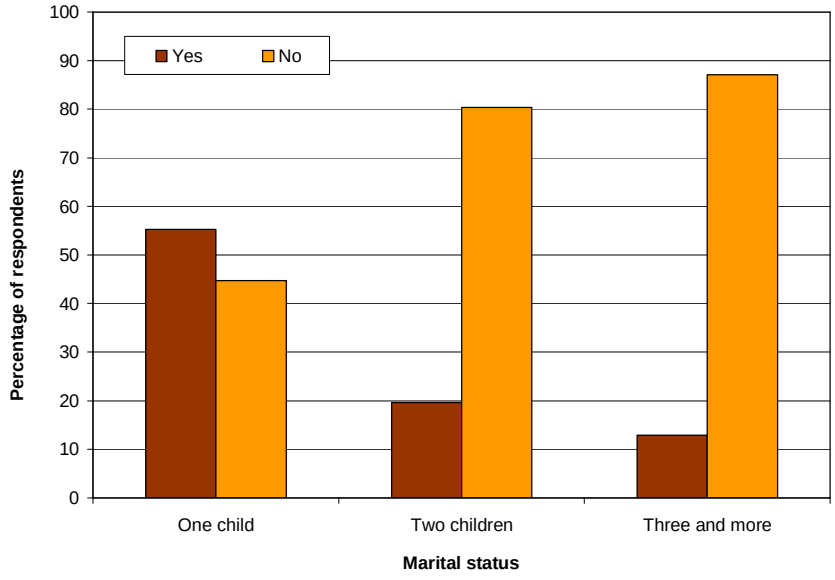


Note: Question: Are you planning to have one more child in the future?

Source: Family transformation survey, 2008

More then 25 % of never married mothers delivered a child because they did not want to have an abortion and to be harmed. More than 10 % of married mothers were pregnant because a woman should have a child after getting married, and 10 % of divorced respondents were motivated by the same reason. Figure 48 clearly demonstrates that the desire to have one more child depends on age. Younger generations want to have one more child in the future, while older generations from the age of 35 do not intend to do it. Moreover, women with one child are more willing to have another one in the future (55 %), while 80 % of respondents who have already two children do not want to have another one in the nearest future (Figure 49).

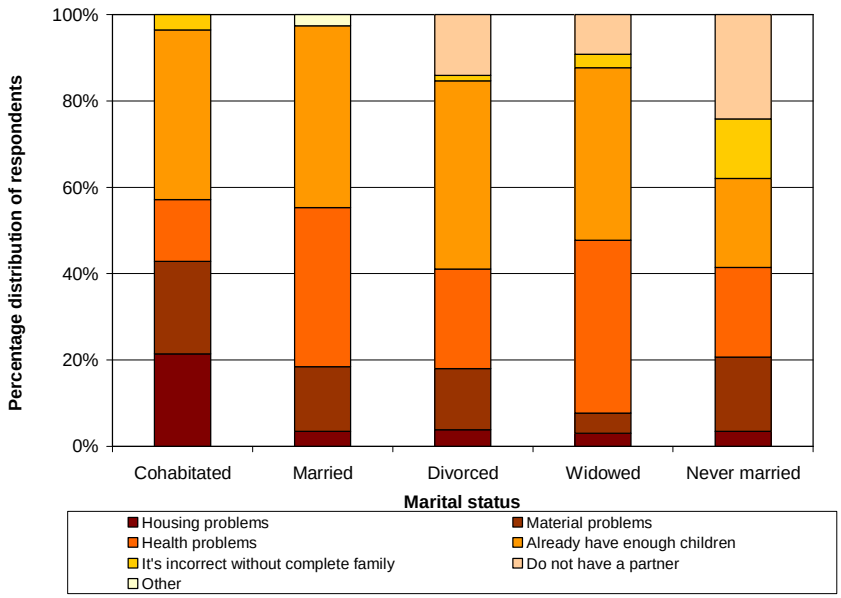
Fig. 49 – Desire to have one more child in the future by number of children



Source: Family transformation survey, 2008

It is obvious that the majority of respondents with at least one child do not want to deliver another one. The reasons and obstacles for this are shown in Figure 50, which include answers of those respondents, who are not planning to have more children. The majority of respondents regardless of their marital status believe that they already have enough children. More than 20 % of women living in cohabitation mentioned housing problems as one of the main obstacles. The material problems are relevant for married, divorced, never married women and respondents living in consensual unions. The biggest proportion of married and widowed women mentioned health problems as a reason why they do not want to have more children. Additionally, 10 % of never married women think that having another child is incorrect without a complete family. The absence of a husband as a problem on the way to the child's birth occurred among never married, widowed and divorced mothers. It means that they would have one more child if they were married or at least had a partner.

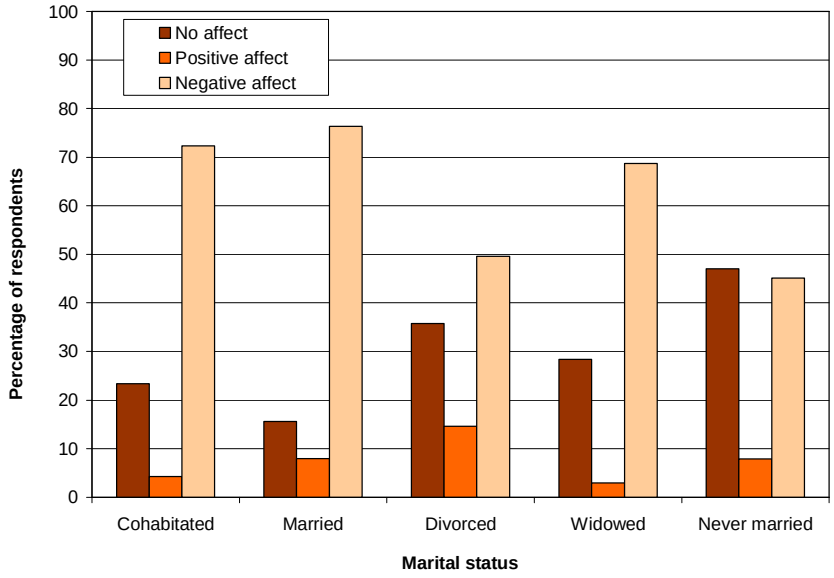
Fig. 50 – Obstacles to pregnancy by marital status



Note: Question: If not planning, why not?

Source: Family transformation survey, 2008

Fig. 51 – Attitudes towards the absence of a father in families by marital status



Note: Question: In your opinion the absence of a father in a family affects the child(ren)?

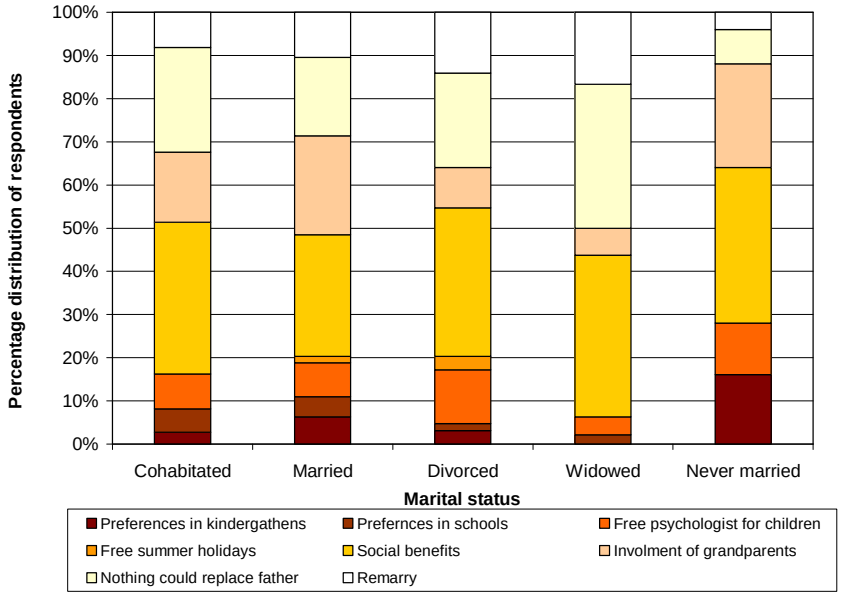
Source: Family transformation survey, 2008

The problems and difficulties in a child's upbringing, which appeared in single-parent families, should be emphasized. The absence of one of the parents, in the case of this study the absence of a father, should play a crucial role in the changes of a mother's marital status. Figure 51 shows the distribution of answers to the question: if the absence of a father affected a child. Essentially, the majority of those respondents

who have a husband or partner (married women and women in cohabitation) as well as widowed mothers believe that it negatively affects. While only approximately half of divorced and never married mothers think that the absence of a father negatively affects a child. The high number of divorced and never married mothers has not experienced any affect of this situation on a child. Another proportion of divorced respondents think that the absence of a father positively affects. Perhaps, this is due to the negative experience that they endured in marriage.

Due to the fact that such a high percentage of respondents think that the absence of a father affects the family and child negatively, it seems to be reasonable to ask them: what should be done to decrease this negative impact? Figure 52 shows the distribution of respondents by marital status and offered recommendations for the reduction of negative effect from the absence of a child's father in a family.

Fig. 52 – Recommendations addressed to reduce negative effects from the absence of father by marital status



Note: Question: What you can recommend in order to reduce the negative affect?

Source: Family transformation survey, 2008

The majority of almost all respondents propose increasing social benefits. More than 10 % of never married women believe that preferences in nursery schools could reduce the negative affect of the absence of a child's father. Almost 10 % of divorced mothers think that free psychologists could help their children. It seems they understand that separation and divorce are the most stressful things, which could happen during a child's life. However, 33 % of widowed mothers believe that nothing could replace the father in a child's upbringing. Moreover, remarriage as one of the solutions to the problem is less frequent among married women and mothers living in cohabitation. However, it comprises more than 10% of divorced and widowed mothers.

Therefore, in this subchapter the main fertility patterns and trends among respondents by marital status were analyzed. The gap between planned and actual numbers of children is higher among divorced women who did not end their fertile age at the moment of divorce. Younger respondents more frequently

use condoms and oral contraception, while older women prefer IUD as a method of contraception. Attitudes towards abortion are mostly positive for all marital categories of respondents. The percentage of women who experienced abortions after the dissolution of marriage higher for divorced women, in comparison with others. Widowed women mostly had abortions during their first marriage. Women who have one child are more willing to have another one in comparison with those who have two or three. The main obstacles in having the desired number of children for divorced and never married mothers are the absence of a partner as well as health problems, material needs, housing problems. The absence of a father negatively affects only the opinion of married, widowed mothers and women living in cohabitation. While the majority of divorced and never married mothers did not see any affect. Remarriage as a solution to the problem is accepted by the divorced and widowed, while never married mothers more concentrated on social benefits and kindergartens.

In summary, this chapter was aimed to analyze women's characteristics, such as: attitudes towards family, religion, family formation and dissolution and fertility according to their age, nationality and marital status and was aimed to highlight the most important respondents' characteristics for the further analysis of trends, related to the diversification of family types. Therefore, the analysis of patterns of emancipation of women was based on additional characteristics which include: the woman's position in a family, the family formation and dissolution process and respondents' fertility. All of the above listed factors showed the heterogeneity of respondents according to marital status. The majority of women have already turned to the emancipated style of life and this could have happened due to specific life circumstances (divorce, separation, widowhood, birth out of wedlock etc.). In contrast, a big proportion of married women are still acting more "traditionally". However, the value of a family as union, which consists of a wife, husband and children, is still relevant among the majority of respondents in spite of the presence or absence of a husband or partner. Moreover, women prefer to be higher educated and see educated men in society. At the same time, women's attitudes towards the distribution of duties in a household and in the child care process allow to come to the conclusion, that according to their opinion, females are located in the same position as males in society. Additionally, marriage as a legal union is still relevant not only for married, widowed women, but also for never married, divorced mothers and women that living in cohabitation. Moreover, a desire to live in marriage, even if it is remarriage is very high among East-Kazakhstan women, especially for divorced women. Almost a half of widowed women prefer to stay alone and live without a partner. However, attitudes towards premarital sexual relationships are mostly positive, which is seen in a relatively high number of ever married respondents that have been pregnant before marriage. The nationality of partners is still important for the majority of Kazakh women, while a large volume of Russians do not pay attention to this factor. However, married women are less intent on getting married to Kazakh partners in comparison with women, who prefer cohabitation. The conditions of family origin, such as: premarital sexual relationships, pregnancy before marriage, and hetero-national unions could be a crucial factor in the family dissolution process, mainly in divorce. Moreover, the gap between planned and actual numbers of children is higher among divorced women who did not end their fertile age at the moment of divorce. Younger respondents more frequently use condoms and oral contraception, while older women prefer IUD as a method of contraception. Attitudes

towards abortion are mostly positive for all marital categories of respondents. The percentage of women who experienced abortions after the dissolution of marriage higher for divorced women, in comparison with others. Widowed women mostly had abortions during first marriage. Women who have one child are more willing to have another one in comparison with those who have two or three children. The main obstacles in having the desired number of children for divorced and never married mothers are the absence of a partner as well as health problems, material needs, and enough number of children already. The absence of a father negatively affects on a child only the opinion of married, widowed mothers and women living in cohabitation. While the majority of divorced and never married mothers did not see any affect. Remarriage as a solution to the problem is accepted by the divorced and widowed, while never married mothers more concentrated on social benefits and kindergartens.

Chapter 5

Survival analysis of family dissolution process

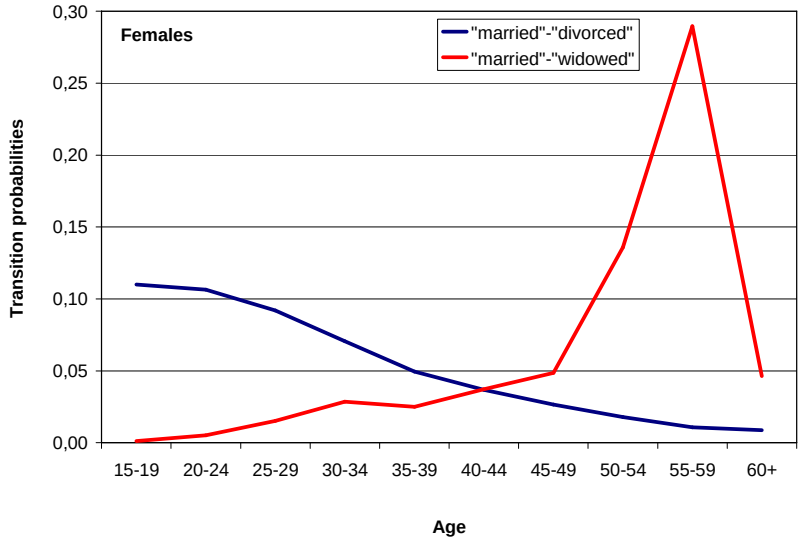
5.1 Methodological guidelines

This chapter is related to survival analysis and the timing of divorce. The reasons for such a detailed analysis of divorce instead of other factors of single-parenthood (extra-marital fertility and widowhood) were investigated in the MA thesis, named "One-parent families in the East-Kazakhstan region" (D. Ualkenova, 2010). Figure 53 shows the differences between transition probabilities from the state "married" to the states "divorced" and "widowed" for females. It is essential that, the probability to become widowed for females of the East-Kazakhstan region is higher than the probability to get divorced at a senior age and started from the ages of 50-54. This is likely to have been caused by a very high mortality level amongst men, and a relatively short life expectancy for males in comparison with females. Also it should be noted that the gap between male and female life expectancies at birth is almost 12–14 years. The sample consists of women having at least one child under the age of 18, aged 15–49. Due to the fact that the probability of getting divorced is higher for this age interval in comparison with the probability of getting widowed, the analysis of divorce seems to be more important. However, Figure 54 as well as Figure 53 shows the same trend: the probability of becoming divorced is higher for ages from 15 to 44. Figure 54 displays a three attrition marriage dissolution table, based on age profile data. It was assumed that at age 15–19 there is a 100 000 table – married population. At young ages the majority of marriage dissolutions are caused by divorce, while in older age groups the majority of dissolutions are caused by death of one of the spouses, especially due to male mortality.

According to the results, which were obtained with the help of a multistate analysis in the MA study, it can be argued that the role of extra-marital births in the one-parent families' appearance is not significant. The biggest impact on the increase in percentage of one-parent households belongs to the marriage dissolution process, such as divorce and widowhood. However, it should be noted that at young and adult ages (15–49) the role of divorce in family dissolutions is more important, compared to widowhood, which is higher for senior ages (started from 50 for females). Therefore, divorce as one of the efficient forces of family transformations from a traditional (nuclear) to a modern (lone-parent) should

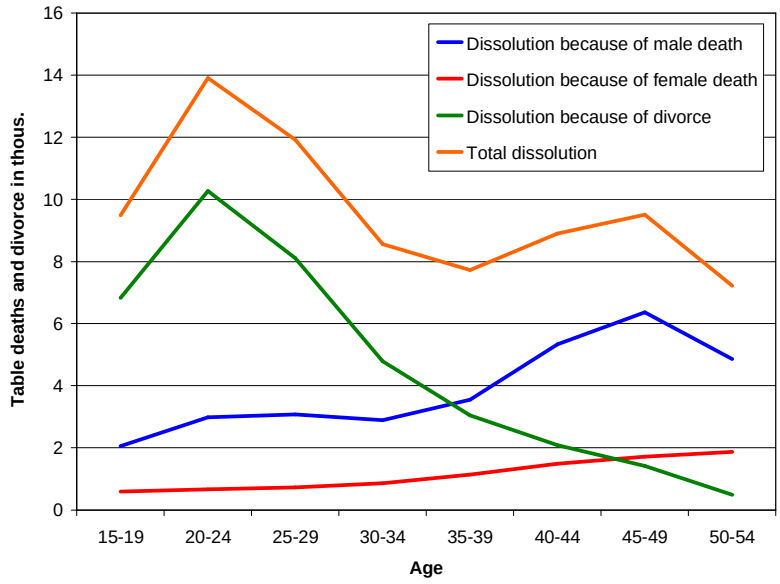
be analyzed in more detail. This chapter sought to test the role of such factors and a set of women's characteristics in taking the decision to divorce.

Fig. 53 – Transition probabilities of moving from the state married to divorced and widowed



Source: Ualkenova, 2010

Fig. 54 – Three attrition marriage dissolution table, the East-Kazakhstan region



Source: Ualkenova, 2010

Initially, the main hypothesis that will be important in understanding the results of the survival analysis should be mentioned. According to the several researches (F. Bernardi, and J. Martinez-Pastor 2011) there is positive relationship between education and divorce. However, with the spread of divorce and the

reduction in its social and economic costs, it might be anticipated that the relationship between education and marriage dissolution was weakened. This study also aimed to test relationships between woman's educational level and intention of being divorced in the East-Kazakhstan region.

With regard to the effect of women's employment, various studies have found that employed women are more likely to divorce than those who are economically inactive (F. Bernardi, and J. Martinez-Pastor 2011, S. South 2001). Working women are able to bear the economic costs of divorce because they receive a salary and are less economically dependent on their husbands (F. Bernardi, and J. Martinez-Pastor 2011). Other studies (F. Bernardi, and J. Martinez-Pastor 2011, G. Becker 1981, T. Parsons 1955) have suggested that female employment calls into question the traditional division of labor within the household. As such, female employment is associated with an increase in union dissolutions. At the same time, very few analyses have investigated the impact of a wife's unemployment on divorce, although there is some evidence of a positive relationship between these two factors (F. Bernardi, and J. Martinez-Pastor 2011). Unemployment usually generates greater stress for a couple, which leads to the marital breakdown. Moreover, unemployment status might be an indicator of expected union dissolution. Economically inactive women, when faced with an unsatisfactory marital relationship, might decide to start looking for a job in anticipation of a breakdown of the union (F. Bernardi, and J. Martinez-Pastor 2011). With respect to changes in these effects over time, the male breadwinner model could be applied to the effect of female employment. When union separation was rare, economic resources were crucial for covering the legal costs associated with divorce, and for starting an independent life. It has also been argued that the positive effect of women's economic independence on divorce is stronger in more traditional societies (F. Bernardi, and J. Martinez-Pastor 2011, A. Poortman 2007). Moreover it is obvious that working women had a disruptive effect on unions referred to societies in which the model of the male breadwinner was dominant. Given the higher costs of divorce and the stronger mismatch between traditional values and female employment when relatively few women were employed and the male breadwinner model was largely dominant, it might be expected that the positive effect of female employment on divorce was stronger in the past, and that it has declined over time (F. Bernardi, and J. Martinez-Pastor 2011). However, it expected that in the East-Kazakhstan region employed women are more likely to dissolve their marriage compared to unemployed women.

In addition, previous studies have consistently shown that couples who have children are less likely to divorce than couples who do not have children (F. Bernardi, and J. Martinez-Pastor 2011). Moreover, social psychology has demonstrated that having children increases the marital commitment. Consequently, it is less likely that the parents who are happy in marriage will divorce (J. Brines, and K. Joyner 1999). It may also be the case that spouses who are not confident of the durability of their marriage are less likely to have children (F. Bernardi, and J. Martinez-Pastor 2011). Based on these assumptions, the hypothesis is that in the East-Kazakhstan region a woman's risk of being divorced is decreasing with the number of children. Accordingly, women having one child are more likely to dissolve their marriage compared to women with two or more children.

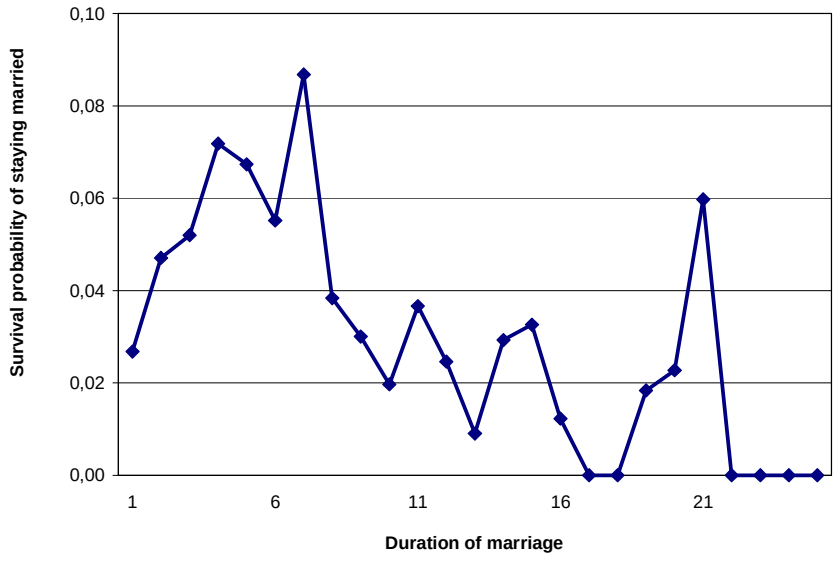
According to some researches (F. Bernardi, and J. Martinez-Pastor 2011) parental divorce and premarital pregnancy could be influential on taking decision to divorce. With regard to changes over time,

the main hypothesis is that, with the diffusion of divorce, children of divorced parents become a less select group, and the negative consequences of parental divorce should diminish (F. Bernardi, and J. Martinez-Pastor 2011). The intergenerational transmission of divorce is expected to decline. According to the researchers, the evidence supporting this hypothesis is mixed (F. Bernardi, and J. Martinez-Pastor 2011). According to this, it is expected that in the East-Kazakhstan region the women who experienced parental divorce are less likely to dissolve their first marriages. Additionally, it was assumed that the premarital pregnancy positively associated with the risk of being divorced among East-Kazakhstani women.

5.2 Analysis of explanatory variables by using of Life-Table (acturial) and Kaplan-Meier (product limit) estimations

This subchapter is related to the analysis of explanatory variables, which were used in modeling. The survival data is based on survey results and includes censored (still married in the end of observation time) and uncensored (divorced) observations. The first step in this analysis of survival data is the estimation of survival distribution function (SDF), cumulative distribution function (CDF) and hazard function. This estimation was done with the help of Lifetest procedure in SAS 9.2 software by using life-table (or acturial) method. Figure 55 demonstrates the proportion of women who "survived" (or still have status "married") during the survival time.

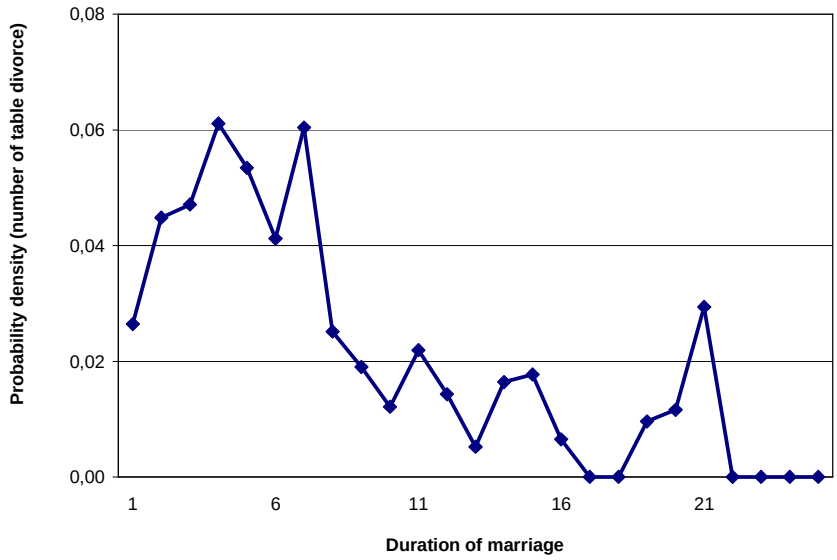
Fig. 55 – Survival distribution function by duration of marriage (life table method)



Source: SAS output

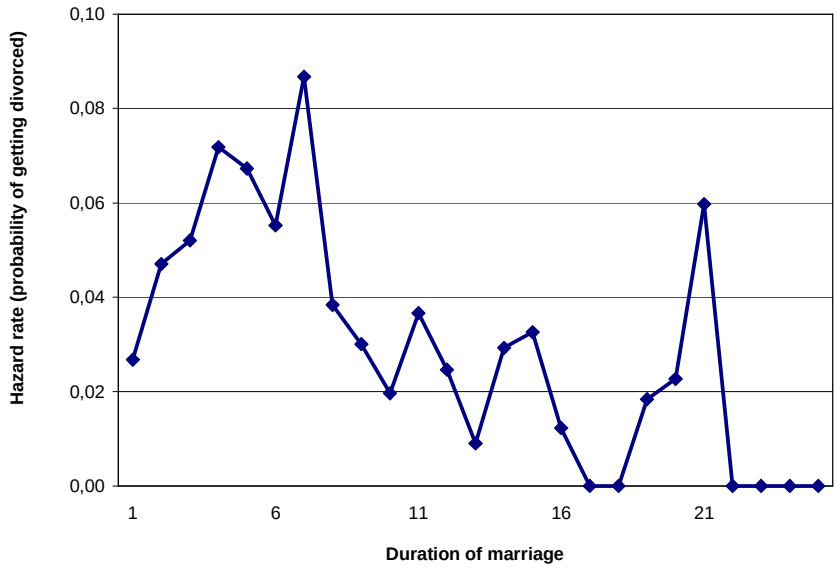
The next two Figures 56 and 57 graphically show the distribution of cumulative density function and hazard function.

Fig. 56 – Density function by duration of marriage (life table method)



Source: SAS output

Fig. 57 – Hazard function by duration of marriage (life table method)

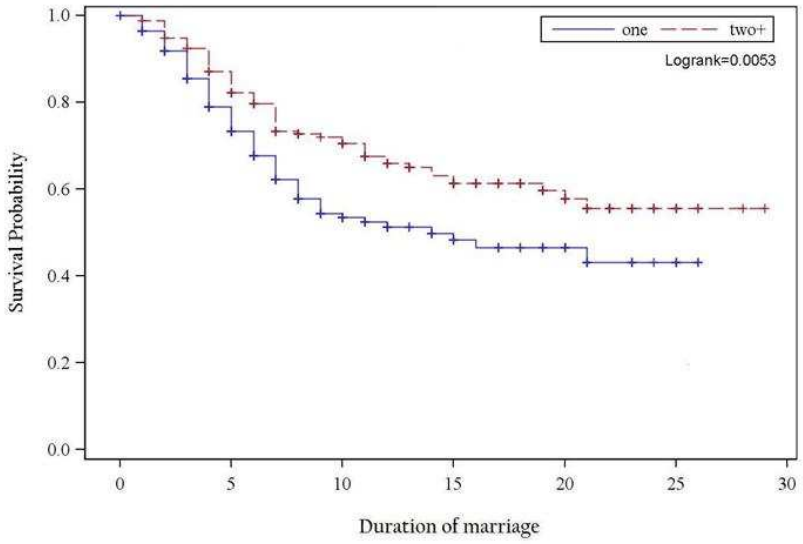


Source: SAS output

Next with the help of the Kaplan-Meier (or product-limit) method the survival distribution functions were estimated. They are stratified by the main characteristics, such as: the number of children, education, nationality, place of residence, employment etc. Figure 58 presents the distribution function stratified by the number of children. The rank test for homogeneity indicates a significant difference between the groups of respondents according to the number of children (p-value for Logrank test is equal to 0.0053). Women with two and more children are more likely to stay married in comparison with women having

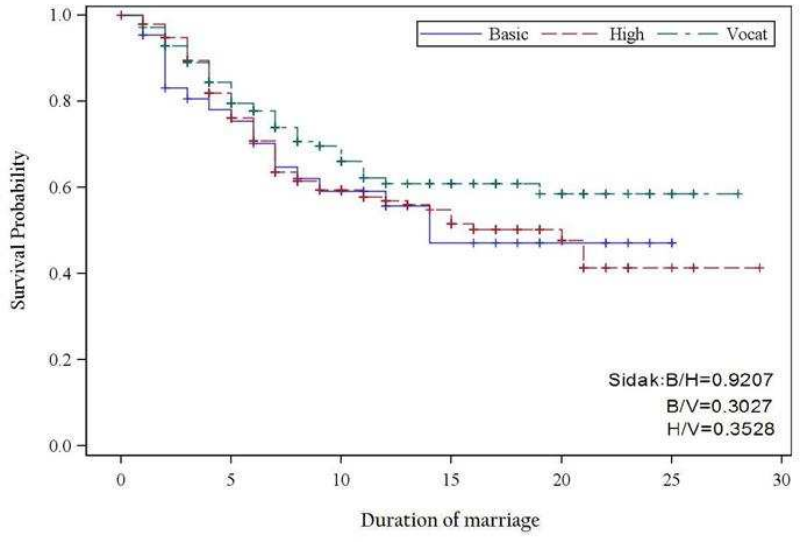
only one child. This could be caused by divorce, when women could not have an opportunity to deliver more children due to divorce.

Fig. 58 – Survival distribution function by number of children and duration of marriage



Source: SAS output

Fig. 59 – Survival distribution function by education and duration of marriage



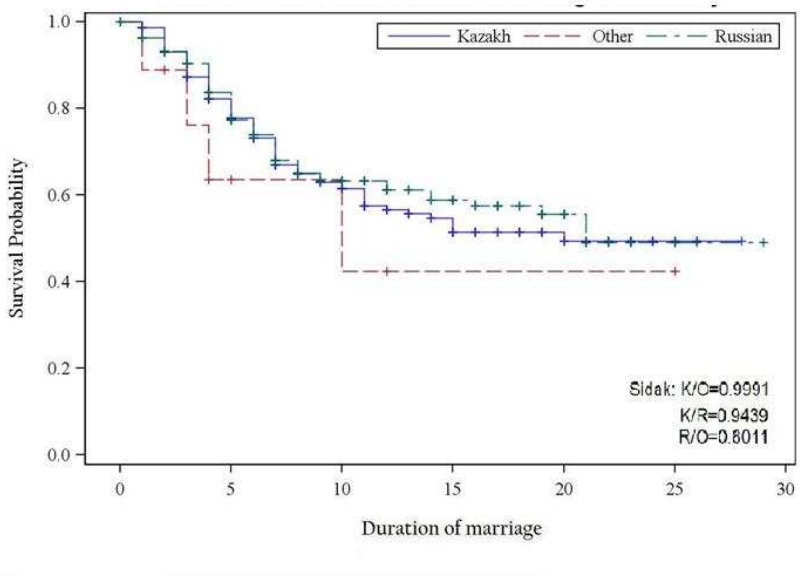
Source: SAS output

There is no significant difference between survivors stratified by educational level according to the Logrank test, p=0.6125 (Figure 59). The Šidák multiple-comparison for pairwise testing is also not significant (Basic-High p=0.9207; Basic-Vocational p=0.3027; High-Vocational p=0.3528). It should be noted that during the last two decades education became less significant in Kazakhstan due to the fact that

it has become easily accessible and it is formal in character. After the dissolution of the Soviet Union a large number of private universities appeared, which were not interested in the level of education, but mostly interested in financial earning. For example, during the Soviet period in the East-Kazakhstan region there were only two universities (technical and pedagogical), in the 90s the number of universities increased to 8. However, there were still just two public universities (both controlled by the Ministry of education), while 6 out of 8 were private. As a consequence, clear boundaries between a higher educated group of population and population having low educational level disappeared. Therefore, the educational level as one of the characteristics of intention to divorce is less applicable to the current Kazakhstani reality (which was justified by the ANOVA test).

The next Figure 60 illustrates the survival distribution function stratified by nationality of respondents. Surprisingly, Kazakh and Russian women show relative homogeneity in patterns, women representing Other nationalities are more frequently divorced. The Logrank test shows that the differences are not statistically significant (p=0.5574). The Šidák multiple-comparison test similarly shows the homogeneity of these groups (Kazakh-Other p=0.9991; Kazakh-Russian p=0.9439; Other-Russian p=0.8011).

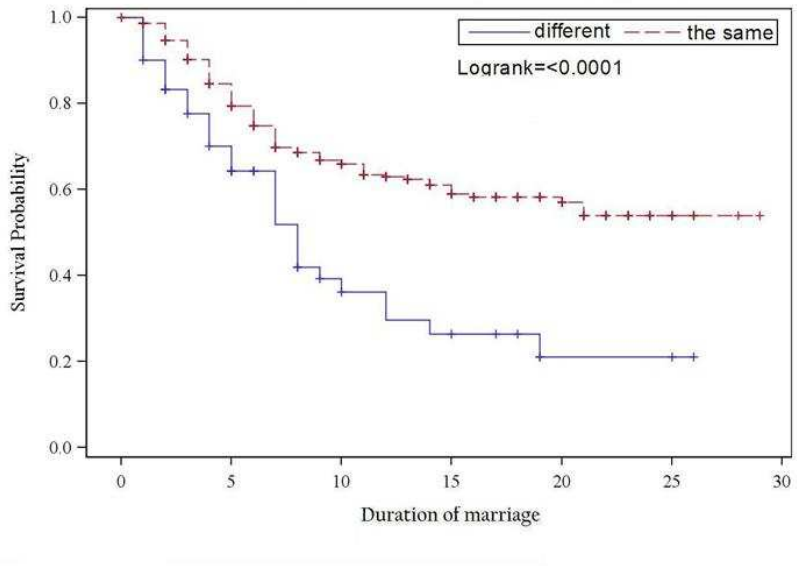
Fig. 60 – Survival distribution function by nationality and duration of marriage



Source: SAS output

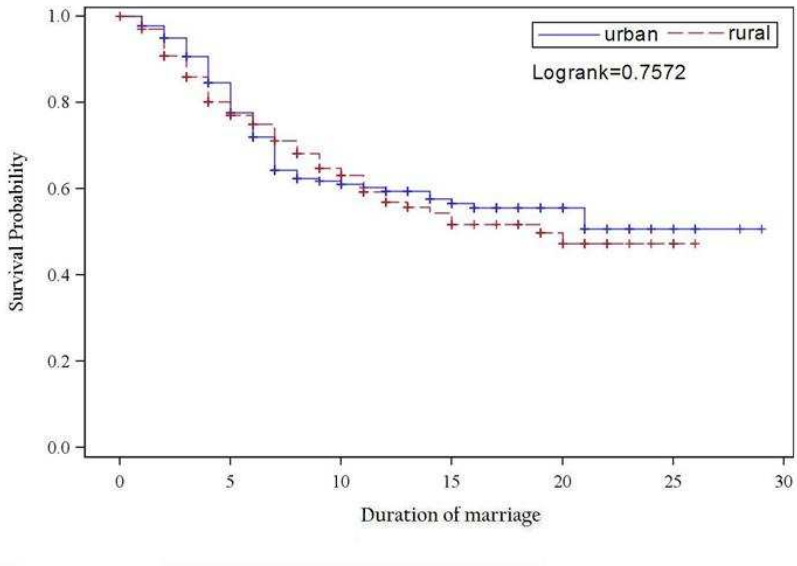
In comparison with previous situation, the trend shown in Figure 61 seems to be more interesting. The survival function is stratified by the differences in spouses' nationalities and showed statistically significant results. The hetero-national unions survived less than the spouses with the same nationality. Mostly this could be explained by the existing cultural, mental and psychological differences between nationalities, even if they have common historical past in the Soviet Union. The way of solving problems, acceptance of new life styles, even attitudes towards life, marriage, religion, children and family (also parental family), housekeeping and childcare could be problematic in the life of spouses with different nationalities.

Fig. 61 – Survival distribution function by the difference of spouses' nationality and duration of marriage



Source: SAS output

Fig. 62 – Survival distribution function by the place of residence and duration of marriage

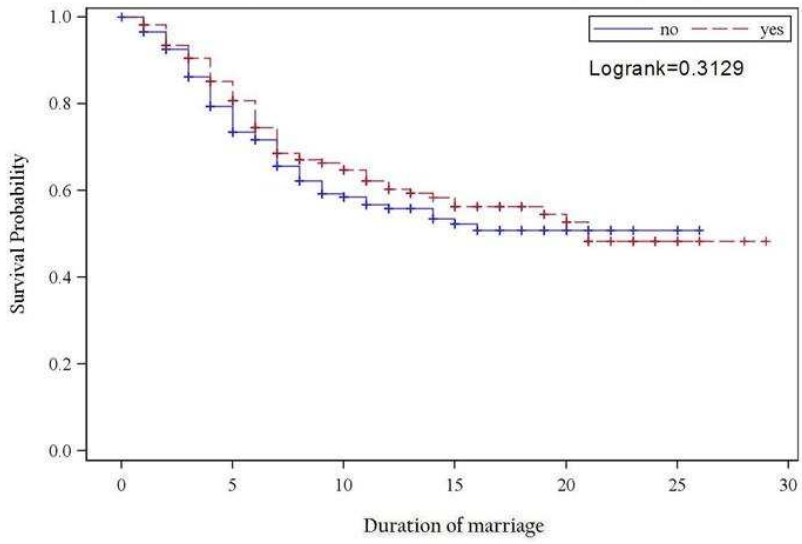


Source: SAS output

Figure 62 displays the difference between urban and rural respondents' survivorships of unions according to the duration of marriage. The differences are graphically observed, even if it is not statistically significant (p=0.7572). However, it seems that rural respondents divorced less during the observed time period compared to urban. However, the process of urbanization in Kazakhstan and particularly in the East-Kazakhstan region is still going on. During the Soviet period the percentage of the urban Kazakh

population was less in comparison with Russian. The Kazakh population was mostly rural. After the dissolution of the Soviet Union the majority of Russian, German, Ukrainian and Jewish people moved to their historical motherlands. For the rural Kazakh population it became easier to get higher paid jobs in the cities compared to previous years, when the tacit policy was practiced, aimed to employ only Russians in the cities, and to keep Kazakhs in rural areas. Kazakh people, concentrated before in rural areas moved to the cities. This fact fueled the disappearance of differences between the rural and urban population. Religiosity is also influential in the family dissolution process. But the Kazakhstani religiosity is specific, which is proved by Figure 63. Even if the difference is not statistically significant (p=0.3129), the religious respondents are more likely to stay in marriage compared to unbelievers. Perhaps, unreligious women must have more liberal attitudes about marriage and divorce and probably more frequently accept new life standards. At the same time, even those who positioned themselves as believers have more liberal attitudes about divorce. This is due to the fact that religion in the East-Kazakhstan is more likely to belong to one of the following specific groups: Islam, Christianity, etc.

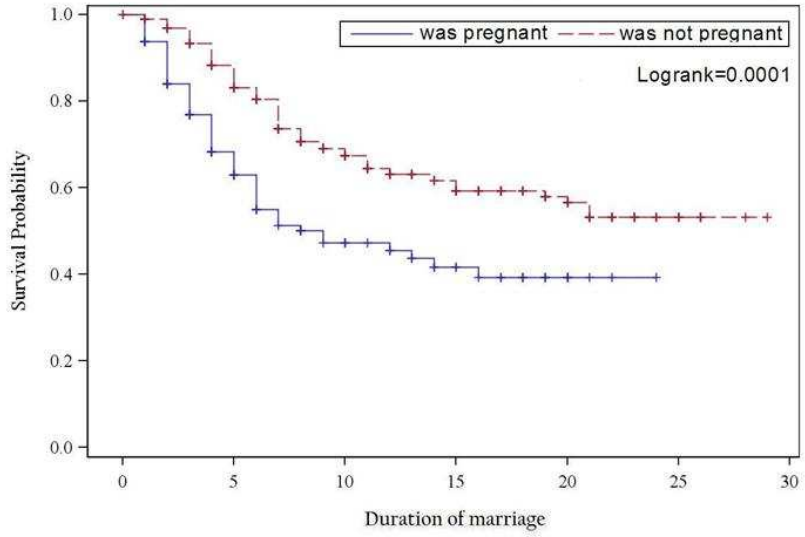
Fig. 63 – Survival distribution function by the religiosity and duration of marriage



Source: SAS output

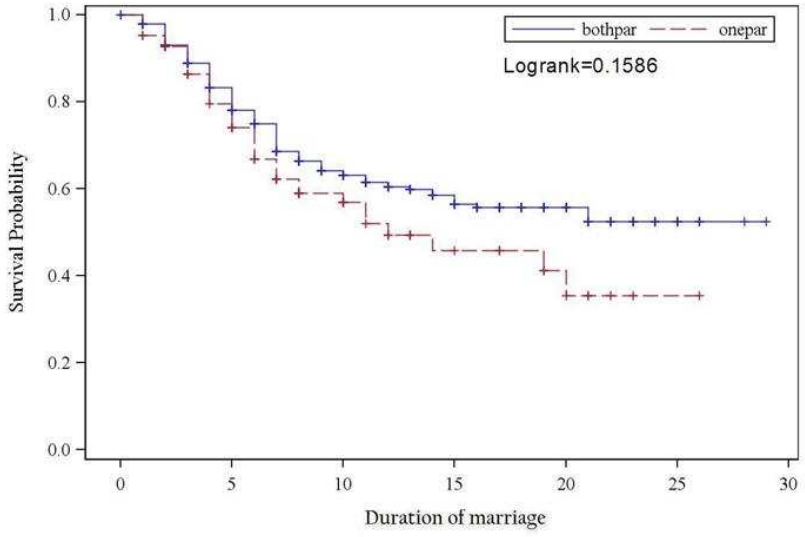
Another important aspect in this survival analysis is the issue of the bride's pregnancy before marriage. In Kazakhstani culture there is a relatively common feature – the so called "marriage due to pregnancy of women", which is more popular amongst the younger generations. Mostly, spouses decide to get married in order to keep a child, which is not logically correct. Practically, the main problems appeared in marriage and the majority of such unions ending in divorce. Figure 64 shows that women who were pregnant before marriage more frequently experience divorce in comparison with women who were not pregnant before marriage (p=0.0001). Moreover, the majority of divorce happened in the first 5 years of living in marriage.

Fig. 64– Survival distribution function by pregnancy before marriage and duration of marriage



Source: SAS output

Fig. 65 – Survival distribution function by the type of parental families and duration of marriage



Source: SAS output

The type of parental family can indirectly influence the respondents' acceptance of divorce and loyal attitudes towards marriage. According to psychologists, humans generally and women particularly copy the lifestyle of their parents, as well as characters, behavior and marital status. In Figure 65 the difference between two categories of respondents, which belong to different types of parental families is clearly observed, even if it is not statistically significant (p=0.1586). However, it seems that women who grew up with both parents divorce less frequently in comparison with women growing up with mothers only. It

seems that for women who grew up with both parents, the decision to divorce is more difficult, mostly due to worrying about child's future and his/her mental and psychological conditions.

According to the results of the Kaplan-Meier estimation of survival density functions, it is obvious that there are a few parameters which could be used in the construction of proportional hazards regression models. The unions' survivorship depends on such characteristics, as: the respondents' number of children, difference of spouses' nationalities, and the fact of pregnancy before marriage. Less significant differences were observed between the respondents' divorce risks according to their education, nationality, place of residence, degree of religiosity, and the type of parental family.

5.3 Modeling of explanatory variables

The next step of this study is the construction of models with the help of Cox's proportional hazards method. In this subchapter the effect of a set of explanatory variables on the occurrence and timing of divorce will be described. It was assumed that the dependent variables are right censoring, because spouses could experience divorce after conducting the survey. Explanatory variables were divided into 4 groups: demographic (age at marriage, number of children, and age of last child), socio-economic (place of residence, employment, educational level), psycho-social attitudes (the type of parental family, religiosity, attitudes toward marriage, divorce, family and premarital sexual relationships), and conditions of marriage formation (spouses' national difference, pregnancy before marriage).

Tab. 40 – Proportion of divorced according to the main characteristics of women

Parameters	**% of divorced**	**Number of divorced**	**% of sample***
Age at marriage			
Early marriage (16–22)	44.5	90	21.3
Late marriage (23 and later)	28.6	63	14.9
Number of children			
One child	36.3	91	21.4
Two and more	35.9	62	14.6
Last child's age			
Less than 6	28.7	59	13.9
More than 6	43.1	94	22.2
Place of residence			
Urban	36.2	72	17.0
Rural	36.0	81	19.1
Employment			
Employed	36.6	136	32.1
Unemployed	32.7	17	4.0

Tab. 40 continued

Education			
Higher	37.1	89	4.5
Vocational	32.1	45	21.0
Basic	43.2	19	10.6
Type of parental family			
One-parent	44.1	37	8.7
With both parents	34.1	116	27.3
Religiosity			
Not religious	38.1	78	18.4
Religious	34.4	75	17.7
Attitudes toward marriage			
Marriage is unimportant	28.1	67	16.5
Marriage is important	45.9	73	18.0
Attitudes toward divorce			
Not accepted	10.2	10	2.4
Accepted	43.9	143	33.7
Attitudes toward family			
Modern	96.0	24	5.7
Traditional	32.3	129	30.4
Attitudes toward premarital sex			
Not accepted	30.7	78	18.4
Accepted	44.1	75	17.7
Spouses' national difference			
The same nationality	32.5	118	27.8
Different nationalities	57.4	35	8.3
Pregnancy before marriage			
Was not pregnant	32.0	94	22.3
Was pregnant	45.7	59	14.0
Total divorced	**100.0**	**153**	**36.1**

Note: *=from those who were ever married

Source: SAS output

The proportion of the divorced according to women's characteristics are displayed in Table 40. The descriptive analysis is necessary in order to correct formulating categories according to parameters. The first parameter related to the respondents' age at marriage. Accordingly, the assumption, that couples who experienced early marriage are more likely to divorce was formulated. Early marriages lie in age interval between 16–22, while late marriages started from 23 and later. Additionally, the variable corresponding to the number of children was included in the models. The age of last child could also be influential in the decision to divorce. This variable consists of two categories: less that 6, and more than 6. It was assumed, that women, having children aged less than 6 are less likely to get divorced, than others. The place of

residence is also included in the model. The employment status of women could also be crucial in the decision to divorce. Employed women are mostly more independent and can become divorced easier in comparison to their unemployed counterparts. Even if educational level was less significant in the Kaplan-Meier analysis, this variable was included in the model. It was divided into categories: women with higher, vocational and basic education. The percentage of divorced among respondents who grow up with one parent only is higher in comparison with women from families with both parents. Despite the fact that the level of religiosity is more formal in the East-Kazakhstan region, this variable was included in the model. Attitudes towards marriage, divorce, family and premarital sexual relationships can be taken as explanatory variables. They were divided into two opposite categories, describing positive and negative attitudes, acceptance and non acceptance of new styles, modern and traditional attitudes. The last group of explanatory variables is describing the conditions and characteristics of marriage: spouses' national differences, and bride's pregnancy before marriage. The Cox's proportional hazard models are shown in Table 41. There are four models, which are becoming increasingly complex. The first model considered only demographic characteristics of respondents, such as: age at marriage, the number of children, and last child's age. The score test shows the statistical significance of p-value. The hazard rate of divorce for respondents, who experienced early marriage, was estimated to be 1.5 times greater than for women married at late ages. At the same time, the relative risk to be divorced for women having one child 1.8 times higher than for those who have two and more children. The risk of being divorced is significantly higher for women, who have a child at the age of less than 6.

The second model also includes the socio-economic characteristics of respondents: place of residence, employment, educational level. The last child's age becomes less significant in the women's risk of being divorced. Additionally all socio-economic factors are not influential to the woman's intention to be divorced.

The third model in addition to the above mentioned variables includes psycho-social conditions (mentality): type of parental family, religiosity, and attitudes towards marriage, divorce, family and premarital sexual relationships. In this model the differences between respondents according to employment became statistically significant. Surprisingly, unemployed women are more likely to get divorced compared to employed respondents the hazard ratio is 1.8. This variable is tested in the fourth model and also showed significant results. The religiosity, as well as the type of parental family is not influential to the risk to become divorced. The relative risk of getting divorced for women who mentioned marriage as an important thing is higher in comparison with the respondents for whom marriage is unimportant. The women for whom marriage is unimportant mostly stay in cohabitation, or deliver a child out of wedlock. And those who think that marriage is important in their life more frequently marry and as a consequence more frequently divorce. This is the main reason of such a surprising result. The hazard ratio of divorce is higher for women who accepted divorce compared to those who not accepted. The relative risk to get divorced for women with modern attitudes towards families (family considered as consisting of mother and child) is 4 times higher than respondents with traditional attitudes (family should consists of husband, wife, children and spouses' parents or other relatives).

Tab. 41 – Cox's proportional hazard models

Parameters	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Age at marriage (reference: late marriage (23 and later))				
Early marriage (16–22)	1.54**	1.56*	1.38*	1.32
Number of children (reference: two and more)				
One child	1.79**	1.76**	1.39*	1.44*
Last child's age (reference: less than 6)				
More than 6	0.73*	0.77	0.80	0.79
Place of residence (reference: urban)				
Rural		1.14	1.21	1.17
Employment (reference: employed)				
Unemployed		1.28	1.81*	1.66*
Education (reference: basic)				
Higher		1.04	0.78	0.89
Vocational		0.74	0.53*	0.60
Type of parental family (reference: with both parents)				
One-parent			1.29	1.30
Religiosity (reference: religious)				
Not religious			0.98	1.00
Attitudes toward marriage (reference: marriage is important)				
Marriage is unimportant			0.66*	0.63*
Attitudes toward divorce (reference: accepted)				
Not accepted			0.15**	0.15**
Attitudes toward family (reference: traditional)				
Modern			4.23**	3.59**
Attitudes toward premarital sex (reference: accepted)				
Not accepted			0.86	0.94
Spouses' national difference (reference: different)				
The same nationality				0.57**
Pregnancy before marriage (reference: was pregnant)				
Was not pregnant before marriage				0.59**
Score test	p=0.0020	p=0.0034	p=<.0001	p=<.0001

Note: *=p<0.05; **=p<0.01

Source: SAS output

The attitudes towards premarital sexual relationships are not significantly influential in the intention to get divorced. This is due to the fact that the premarital sexual relationships in the East-Kazakhstan region are accepted by all women despite their marital status. The differences according to acceptance of

premarital sexual relationships are more essential by age profile: younger generations are more loyal in comparison to the senior generations.

The last model includes variables describing the conditions of marriage formation, such as: the spousal differences by nationality and the fact of pregnancy of respondents before marriage. The variables related to the number of children, respondents' employment, and attitudes towards marriage, divorce, and family are still showing the statistically significant results. It is essential that both of the variables indicating the conditions of marriage formation are statistically significant. The risk of getting divorced for women who have a different nationality from their husbands is twice as high compared to women with the same nationality as their husbands. Additionally, women who were pregnant before their marriage have a twice as high risk of getting divorced than those who were not. The Score test for all models is statistically significant.

Accordingly, the risk of becoming divorced is relatively higher for those who experienced early marriage, have one child aged less than 6 years, unemployed, accepted divorce and have positive attitudes towards modern family (consisting of mother and child), were pregnant before the marriage and have a different nationality in comparison with their husbands. The examined variables that influence divorce clearly show the factors which are also influential on the process of family transformation in the East-Kazakhstan region. Women with modern attitudes towards family, marriage and those that accept new life styles are much more willing to become lone-parents. The next chapter will conduct a detailed analysis of reproductive behavior of divorced women after the dissolution of their marriage. Additionally, an important task is the examination of predictors which influence on the acceptance and formation of stepfamilies and families with cohabitated partners, which are also classified as one of the modern types of family.

Chapter 6

The impact of marital instability on a woman's fertility

6.1 Methodological measures and analysis of predictors

This chapter provided an analysis of the impact of woman's marital instability to fertility behavior. More precisely, the implication of divorce on a woman's further childbearing process will be analyzed. Therefore, the main idea of this study is to present an analysis of the negative or positive impacts of the family dissolution process on a woman's desired number of children in the East-Kazakhstan region. The interpretation of the negative and positive affects should be considered in details. According to the majority of scientists (S. Meggiolaro, F. Ongaro 2010, E. Thomson, J. Li 2002), family dissolution leads to an interruption or termination of the fertile period during first marriages. As a consequence, woman could not deliver the desired number of children due to unfavorable family situation. As such, this is a negative impact of the family dissolution process. However, notably, there is another opinion related to a positive (or not influential) impact. Some studies (S. Meggiolaro, F. Ongaro 2010) have proved that the interruption of marriage could be problematic in order to have the desired number of children, but further repartnering and remarriage is slowly correcting this situation. In this situation the level of fertility could be similar to the fertility of those who stayed in their first marriage. Some of demographers explained this as a desire to have a shared child or children with a new partner and as a consequence "the recapturing of most of the lost children due to the dissolution of the first marriage" (S. Meggiolaro, F. Ongaro 2010:964).

In light of these issues, this study aims to analyze the positive and negative impacts of family disruption (divorce) on a woman's fertility: if divorce lowers the number of children, even if a woman remarried or repartnered, or the number of children remains at the same level. The first task is to provide an analysis of the predictors which are influential to the birth of children after family dissolution among divorced women at a fertile age. In addition, the relationship between a woman's marital status and the number of children by comparing divorced women, remarried or repartnered women and women, staying

in first marriage will be examined. The main idea is to attempt to evaluate to what extent the family dissolution could be influential on a woman's fertility. Moreover, the additional factors which lead to the delivery of children after family dissolution will be examined.

In this study the logistic regression (binary and ordinal) was applied. Logistic regression is a model used for the prediction of the probability of occurrence of an event by fitting data into a logistic curve (D. Cox, E. Snell 1989, D. Collett 1991). Therefore, binary logistic regression, where a discrete response variable is a binary variable was used. As a binary response variable, the question regarding the appearance of post-dissolution birth with a yes-no answer was interpreted. For binary response models, the response, Y, of an individual or an experimental unit can take on one of two possible values, denoted for convenience by 0 and 1 (Y=0 if a post-dissolution birth is present among divorced women, otherwise Y=1). Suppose *x* is a vector of explanatory variables and $p = \Pr(Y = 1|x)$ is the response probability to be modeled (when a post-dissolution birth is absent). Each of the regression coefficients describes the size of the contribution of the risk factor. A positive regression coefficient means that risk factor increases the probability of the event, while a negative regression coefficient means that risk factor decreases the probability. The large regression coefficient means that the risk factor strongly influences the probability of an event. With the help of logistic regression the relationship between risk factors, such as: age, the time since marital dissolution, repartnering and remarriage, etc. and an event such as the probability to deliver a child after marriage dissolution will be described. Due to the small sample size in this study, the exact conditional logistic regression is applied.

In order to analyze the relationships between family dissolution, remarriage and repartnering and the number of children, the ordinal logistic regression was used. This method is useful for modeling count variables (the number of children). In this study the number of children per woman according to marital status (women staying in first marriage or experienced the dissolution of marriage) will be modeled. As noted, ordinal logistic regression refers to the case where the dependent variable has an order. The most common ordinal logistic model is the proportional odds model. If the dependent variable is really continuous, and is recorded ordinally (the number of children: the first, second and third), but that it has been divided into j categories then if the real depended variable is *y*, the model is:

$$y_i = x_i\beta + \varepsilon_i$$

The most important factors which are influential to a woman's childbearing after the dissolution of a marriage are: repartnering or remarriage at a fertile age and the existence of children from the previous marriage. Repartnering or remarriage clearly shows that a woman who remarried or has a new partner is expected to have one more shared child in comparison with divorced woman without a partner. This is the main reason of consideration the absence or presence of the partner as one of the predictors in the modeling of binary and ordinal logistic regressions. However, it should be noted that according to the MA study named "One-parent families in the East-Kazakhstan region", the probability of remarriage for divorced females is relatively low in comparison with males (D. Ualkenova 2010). The majority of divorced women at a fertile age are more likely to live with their partners in cohabitation. Perhaps, this is due to a negative experience obtained during the first marriage. Nevertheless, a more detailed analysis of

predictors and factors, which are influential to the intention of living in cohabitation, will be presented in the next chapter. According to the aim of this study, the several hypotheses were formulated. The first hypothesis is that a new partnership (remarriage and cohabitation) is influential on childbearing after the dissolution of marriage. The second hypothesis is related to the assumption that divorced women (both, who did not entered a second union and those who repartnered and remarried) experience lower fertility level compared to continuously married women. However, the differences between the fertility behaviors of remarried and repartnered women should be also highlighted. Some demographers (A. Berrington, I. Diamond 2000, S. Meggiolaro, F. Ongaro 2010) conclude that remarried women are more likely to deliver a child compared to women living in a new partnership. They explain this by the fact that marriage carries an explicit long-term commitment to stay together, and also remarried women may be selected as being more prone to forming a family, and thus to having a child. In connection with this, the differences of post-dissolution fertilities between remarried and repartnered women will be analyzed. The next hypothesis is that remarried women are more likely to have a post-dissolution child in comparison with their repartnered counterparts.

Moreover, the post-dissolution births depend on the number and age of children from the previous marriage. There are three main approaches in the demographic literature, which consider the effect of number of previous children to a post-dissolution fertility. The first group of scientists (R. Rindfuss, L. Bumpass 1977, S. Clarke et al. 1993) conclude that the number of existing children negatively affect the probability of post-dissolution childbearing, while the second group shows a non-linear negative affect (H. Wineberg 1990, A. Berrington, I. Diamond 2000). The last group of demographers demonstrates no affect (J. Griffit, H. Koo, C. Sachindran 1985). However, it was assumed that in the East-Kazakhstan region a woman's number of children from the first marriage lowers the propensity to have a post-dissolution child in the new union, if she already has two and more children. The underlined hypothesis is that women having only one child are more likely to deliver a post-dissolution child in order to provide a sibling to a first child.

The women's experience of a post-dissolution childbearing (mostly after divorce) could be affected by the age of a previous child or children. According to some demographic studies (S. Meggiolaro, F. Ongaro 2010), the age of the last child from the previous marriage influences the probability to have a child in the new union, but the way of influence and the mechanism of this phenomenon are still unclear. It was assumed that the impact of the age of the last child from a previous marriage on a woman's experience of a post-dissolution childbearing in the East-Kazakhstan region is insignificant.

Significantly, the duration since marriage dissolution is also influential on the intention to have a post-dissolution child. According to numerous studies the propensity to deliver a post-dissolution child is increasing with time since the dissolution of unions (S. Meggiolaro, F. Ongaro 2010). The duration since divorce also was included as a one of the predictors of the risk of having a post-dissolution child.

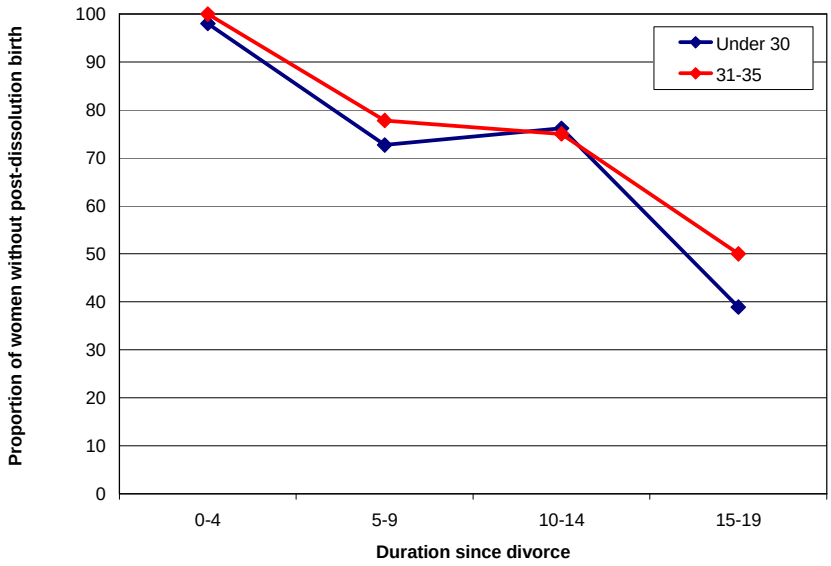
Essentially, the nationality is one of the most influential factors on a woman's marital and fertility behaviors in Kazakhstan. According to some studies (S. Ualieva 1995, 2007, A. Alekseenko et al. 2006), the importance of studying demographic processes in Kazakhstan, such as: marriage, fertility, divorce, and cohabitation according to nationality is underestimated. However, the marital and fertility behaviors

of, for example, Kazakh and Russian women are different. As such, this study also will consider the differences in a woman's post-dissolution marital and fertility behaviors according to nationality in the East-Kazakhstan region.

6.2 Modeling the predictors of childbearing after the dissolution of a marriage

The data used in the modeling of predictors of post-dissolution childbearing included women at a fertile age that experienced divorce in their life-time. As a starting point for the process of modeling, the data relating to the main characteristics will be analyzed. Figure 66 shows the proportion of women who did not experience a post-dissolution childbearing according to age at separation and duration since the divorce.

Fig. 66 – Proportion of women without post-dissolution birth by age at separation and duration since divorce

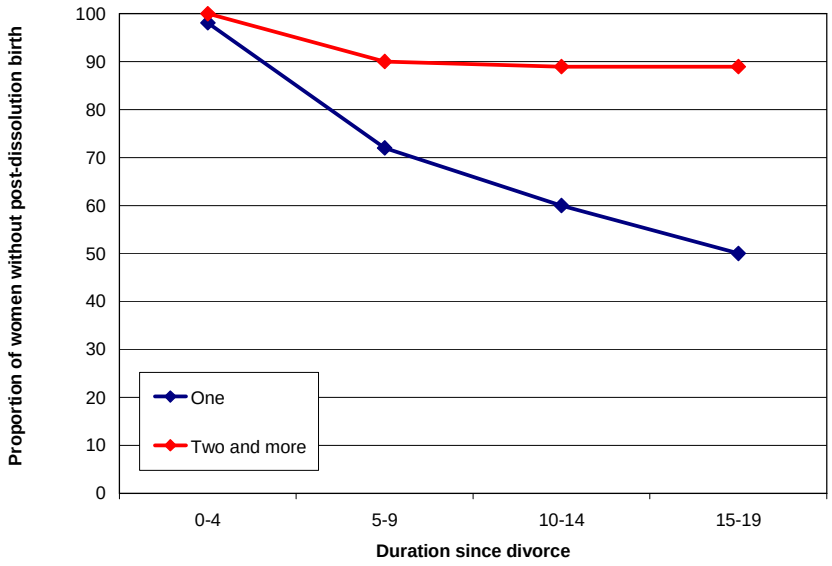


Source: SAS output

Almost 30 % of women for both age categories delivered a child after 5–9 years since dissolution of their first marriage. The proportion of women who experienced divorce at early ages (under the age of 30) and delivered a child 15–19 years after the dissolution of marriage is slightly higher compared to women who divorced at older ages. However, it should be highlighted that the differences among these age categories are minimal for the East-Kazakhstan region. Next Figure 67 shows the proportion of women who did not experience a post-dissolution childbearing according to the number of children from their previous marriage and duration since divorce. As was expected, the proportion of women having one child who experienced a post-dissolution birth is higher in comparison with women having two or more children.

Almost half of the women with one child experienced a post-dissolution birth after 15–19 years since divorce.

Fig. 67 – Proportion of women without a post-dissolution birth by number of children and duration since divorce



Source: SAS output

Table 42 shows the results of the logistic regression models, and aimed to analyze the exact predictors of post-dissolution births. According to this, there three models were estimated. The first model includes the duration since divorce which has been divided into four categories: less than two years, three-five years, six-nine years and more than ten years; a woman's age at divorce: less than 30 years, the age interval between 31 and 35 years, and more than 35 years; and the number of children, born before divorce: only one child, two or more children.

The propensity of delivering a child after the dissolution of marriage is 3.62 times higher for women who went through more than 10 years since divorce in comparison with those who were recently divorced. The odds ratio (Table 43) is 37.2. Essentially, the propensity of having a child after the dissolution of marriage is increasing with the duration spent since divorce. As proved in Figure 66, the age at divorce is less influential on the intention of having a post-dissolution child. Therefore this parameter was excluded from the second and third models in this analysis. The propensity of delivering a child after experiencing a divorce is higher for women having one child from the previous marriage. The odds ratio for women having one child is 13.4 times greater in comparison with divorced women with two or more children at the moment of divorce. This predictor was tested in following three models, and revealed the same results.

Tab. 42 – Exact parameter estimates from logistic regression models analyzing the predictors of post-dissolution births (divorced women under the of 49)

Parameters	**Model 1**	**Model 2**	**Model 3**
Duration since divorce (reference: less than 2 years)			
3-5 years	2.06*	2.06*	1.85
6-9 years	2.65**	2.74**	3.06**
More than 10 years	3.62**	3.73**	3.68**
Age at divorce (reference: less than 30 years)			
31-35	0.07		
More than 35	0.34		
Number of children at divorce (reference: more than one)			
One child	2.61**	2.57**	2.50*
Nationality of women (reference: Kazakh)			
Russian		0.28	
Others		0.04	
Remarriage and repartnering at reproductive age (reference: no)			
Remarried			2.76**
Repartnered			2.50**
Experience of abortion in first marriage (reference: no)			
Yes			1.16

Note: *=p<0.05; **=p<0.01

Source: SAS output

Tab. 43 – Exact odds ratios from logistic regression models analyzing the predictors of post-dissolution births (divorced women under the age of 49)

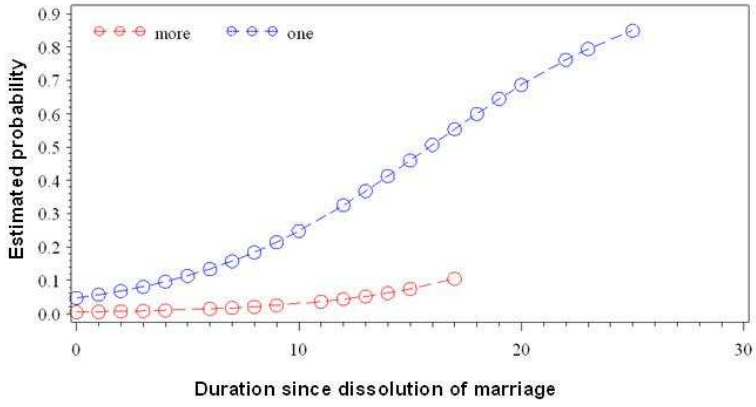
	Model 1	**Model 2**	**Model 3**
Duration since divorce (reference: less than 2 years)			
3-5 years	7.8*	7.8*	6.4
6-9 years	14.2**	15.5**	21.3**
More than 10 years	37.2**	41.7**	39.6**
Age at divorce (reference: less than 30 years)			
31-35	1.1		
More than 35	3.8		
Number of children at divorce (reference: more than one)			
One child	13.4**	13.0**	12.2*
Nationality of women (reference: Kazakh)			
Russian		1.3	
Others		1.0	
Remarriage and repartnering at reproductive age (reference: no)			
Remarried			15.8**
Repartnered			12.2**
Experience of abortion in first marriage (reference: no)			
Yes			3.20

Source: SAS output

The second model also included the nationality of women. As aforementioned in the previous chapters in the East-Kazakhstan region the national differences among Russian and Kazakh divorced women are not significant that was also proved in the logistic modeling. The third model aimed to test the differences in post-dissolution childbearing among repartnered and remarried women. As previously mentioned, remarried women are theoretically more likely to deliver a post-dissolution child in comparison with women who live in cohabitation after the dissolution of marriage. According to demographic literature (S. Brown 2000, S. Meggiolaro, F. Ongaro 2010), repartnering (remarriage and cohabitation) after the dissolution of marriage is closely and positively associated with giving birth. However, in the East-Kazakhstan region, remarried women are more likely to deliver a child after divorce (almost 16 times) in comparison with women who had not married after the dissolution of marriage and remained alone. Moreover, cohabiting women are also 12.2 times more likely to experience a post-dissolution birth compared to divorced women without a partner. At the same time, the odds ratio of delivering a child after the dissolution of union is higher for remarried women in comparison with their cohabiting counterparts. However conclusively, it could be argued that in spite of the hypothesis that East-Kazakhstani women living in cohabitation are less likely to deliver a post-dissolution child, having a partner in consensual union could be an important predictor in post-dissolution fertility behavior.

Figure 68 shows the predicted probabilities of experiencing a post-dissolution childbearing according to duration since divorce and number of children from previous marriage. Accordingly, the predicted probability of delivering a post-dissolution child is higher for women, having one child from previous marriage. Controversially, women with two or more children from previous marriage are less likely to experience a post-dissolution childbearing.

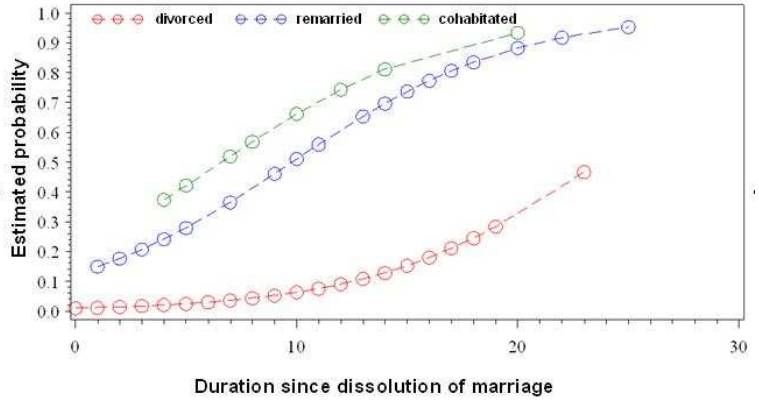
Fig. 68 – Women's probability of having a post-dissolution child by duration since divorce and number of children from previous marriage



Source: SAS output

The probabilities of experiencing post-dissolution births according to a woman's marital status after divorce are shown in Figure 69. Essentially, remarried and repartnered women are more likely to deliver a child after divorce, in comparison with women who remained divorced.

Fig. 69 – Women's probability of having a post-dissolution child by duration since divorce and experience of remarriage and repartnering



Source: SAS output

In summary, the chance of experiencing a post-dissolution birth is increasing with the time spent since divorce, and is negatively associated with the number of children born at first marriage. Another important factor which increases the risk of delivering a child after the dissolution of marriage is the existence of a partner, regardless of a woman's marital status: remarried or living in a consensual union. However, a more detailed analysis of the relationships between a woman's characteristics and post-dissolution fertility should be examined.

6.3 Analysis of the effects of family dissolution to the number of children

This chapter aimed to study the consequences of divorce on women's fertility in general, and the number of children particularly. The data concern ever married women at a fertile age at the time of interview and those who were under the age of 40 at the time of their first marriage. In order to complete the analysis of the factors which are influential on a woman's fertility according to marital status, a description of the fertility level reached by women during their lifetime since the first marriage should be introduced. Table 44 shows the average number of children ever born by married and divorced women at the moment of interview and according to the duration spent in marriage. The mean number of children born by divorced women is relatively higher in comparison with their married counterparts. Perhaps, this is due to the high share of remarried or repartnered women among the divorced. Divorced women will be specified according to the presence of a partner.

Tab. 44 – Average number of ever born children by duration spent in marriage for divorced and married women

Duration spent in marriage	Divorced				Married			
	Mean number of children	Standard deviation	Variance	Number of cases (in abs. numbers)	Mean number of children	Standard deviation	Variance	Number of cases (in abs. numbers)
0–3	1.34	0.59	0.35	47	1.08	0.27	0.07	51
4–8	1.45	0.55	0.30	76	1.29	0.51	0.26	80
9–13	1.75	0.68	0.46	16	1.53	0.61	0.37	53
14–18	1.86	0.90	0.81	7	1.70	0.52	0.27	40
19–23	2.25	0.96	0.92	4	1.67	0.71	0.51	51
24+	0.00	0.00	0.00	0	1.39	0.59	0.34	41

Source: SAS output

Table 45 shows the average number of children ever born by women according to the duration spent in a union and woman's marital status: married, divorced without a partner, divorced with a partner. The presence of a partner after the dissolution of a union is a very influential factor on the intention of delivering post-dissolution children. The mean number of children ever born by divorced women who have a partner is relatively higher in comparison with both groups: married and divorced without a partner. However, it should be noted that the average number of children ever born by divorced women without a partner after the dissolution of union is higher compared to the mean number of children born by married women. However, these two tables do not account for the marriage cohort, which is the number of years spent between marriage and interview. The marriage cohort including the age at marriage could be influential on the number of children, for example, when there are big differences between women living in a marriage of only three years and divorced women, who spent more than 20 years in their previous marriage.

Tab. 45 – Average number of ever born children by a woman's marital status and duration spent in marriage

Duration spent in marriage	Married	Number of cases (in abs. numbers)	Divorced with a partner	Number of cases (in abs. numbers)	Divorced without a partner	Number of cases (in abs. numbers)
0–3	1.06	50	1.71	14	1.20	34
4–8	1.29	78	1.58	24	1.36	55
9–13	1.52	52	1.50	4	1.84	13
14–18	1.72	39	2.00	3	1.60	5
19–23	1.77	44	1.00	7	2.25	4
24+	1.67	18	1.21	24	0.00	0

Source: SAS output

Table 46 shows the average number of children born to an ever-married woman (without taking into account widowed women) by the years spent in marriage, marriage cohort and marital status. The mean number of children is the same for divorced and married women during the first eight years of marriage. For example, three years after their first marriage, divorced and married women have 1.1 children per woman. The average number of children for married women who belong to 9–13 and 14–18 marriage cohorts is higher compared to women who experienced divorce. Thirteen years after the dissolution of

marriage, divorced women show cumulated fertility, which is approximately 0.5 lower than women who remained married at the time of interview. However, divorced women who belong to older marriage cohorts (19–23 and more than 24) have more children in comparison with married women at the same marriage cohort.

Tab. 46 – Mean number of children ever born to an ever-married woman* by the years spent in marriage, years between marriage and interview and marital status

Years between marriage and interview	**More than 24**		**19–23**		**14–18**		**9–13**		**4–8**		**0–3**	
Divorce	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Years spent in marriage												
0–3	1.3	1.6	2.0	2.0	1.5	2.0	1.3	1.1	1.2	1.0	1.1	1.1
4–8	2.0	1.8	1.7	1.0	1.3	1.9	1.2	1.4	1.3	1.3		
9–13	2.0	1.7	2.2	1.5	1.7	1.6	1.0	1.5				
14–18	2.0	2.0	2.0	1.6	1.5	1.7						
19–23	2.1	2.1	2.1	1.8								
24+	2.3	1.9										

Note: * widowed women are excluded from the analysis

Source: SAS output

In essence, it could be argued that divorced women on average have fewer children in comparison with continuously married women. However, in the first years of marriage, divorced and married women show the same levels of fertility. At the same time, after 20 years since the moment of marriage, divorced women have a seemingly a higher average number of children compared to married women.

However, this descriptive analysis is not taking into account other influential factors, such as: the educational level, age at first marriage, place of residence etc. Therefore, the next step is modeling the effects of family dissolution on fertility levels. Aforementioned, in order to investigate the role of a woman's marital status with the likelihood of having more children method, named ordinal logistic regression was applied. Table 47 displays the parameter estimates from the cumulative logistic regression, measuring the number of ever born children according to a woman's marital status and other important factors. One of the assumptions of ordinal logistic regression is that the relationship between each pair of outcome groups is the same. In other words, ordinal logistic regression assumes that the coefficients which describe the relationship between the lowest versus all higher categories of the response variable are the same as those that describe the relationship between the next lowest category and all the highest categories. This is called proportional odds assumption or parallel regression assumption. In connection with this, the test of proportional odds assumption should be statistically insignificant or greater than 0.05. For all three models the proportional odds assumption was accepted.

Tab. 47 – Parameter estimates from ordinal logistic regression models analyzing the cumulative number of children by women's marital status

	Model 1	**Model 2**	**Model 3**
Intercept 3	-2.68**	-2.82**	-3.04**
Intercept 2	0.01	-0.09	-0.05
Age at interview (reference: less than 34)			
35–39	0.40*	0.40*	0.97**
40–49	0.71**	0.71**	1.14**
Age at first marriage (reference: middle)			
Early marriage		0.39*	0.34
Late marriage		-0.31	0.05
Experience of divorce (reference: not divorced)			
Divorced under the age of 40, no second union	-0.44*	-0.49*	-0.14*
Divorced under the age of 40, in the second union	0.52	0.37	1.23**
Place of residence (reference: rural)			
Urban			-0.50*
Educational level (reference: vocational)			
Basic			0.45
Higher			0.04
Employment (reference: unemployed)			
Employed			-0.39
Nationality (reference: Russian)			
Kazakh			0.71**
Other			1.44*
Siblings (reference: 2 and more)			
Without siblings			0.01
One			-0.66*
Reproductive years spent in a union (reference: more than 10 years)			
0–5			-1.47**
6–10			-1.59

Source: SAS output

The first model contained only two variables: the woman's age at the interview, and their marital status (Table 47). Table 48 displays the odds ratios from ordinal logistic regression. The number of children ever born by a woman is increasing with the age of the woman. For example, if the age of the woman was increased for a one unit in the age group of 35–39, the expected value of the number of children would result in a 0.40 unit increase in log odds of the ordered number of children, whereas the other variables in the model will be constant. It also means that for a one unit increase in the 35–39 age group the odds ratio of three children are 4.52 = *exp*(0.40) times greater than for two and one child

compared to women aged less than 34. The odds ratio of having more children is 6.13 = *exp*(0.71) higher for women aged between 40–49 compared to women aged less than 34.

Tab. 48 – Odds ratios from ordinal logistic regression analyzing the number of children by women's marital status

	Model 1	**Model 2**	**Model 3**
Age at interview			
35–39 vs. less than 34	4.52*	4.51*	2.64**
40–49 vs. less than 34	6.13**	6.19**	3.13**
Age at first marriage			
Early marriage vs. middle		1.62*	1.40
Late marriage vs. middle		0.80	1.06
Experience of divorce			
Divorced under the age of 40, no second union vs. not divorced	0.65*	0.61*	0.87*
Divorced under the age of 40, second union vs. not divorced	1.68	1.44	3.43**
Place of residence			
Urban vs. rural			0.60*
Educational level			
Basic vs. vocational			1.56
Higher vs. vocational			1.05
Employment			
Employed vs. unemployed			0.68
Nationality			
Kazakh vs. Russian			2.03**
Other vs. Russian			4.20*
Siblings			
Without siblings vs. two and more			1.00
One vs. two and more			0.52*
Reproductive years spent in a union			
0–5 vs. more than 10 years			0.23**
6–10 vs. more than 10 years			0.56

Source: SAS output

The number of children born by married women and divorced women without the second union (regardless if it is remarriage or cohabitation) are significantly different. As the woman moved from being married to divorced without a second union in the future, the number of children expected a –0.44 unit decrease in log odds, while the other variables in the model are held constant. Moreover, women who experienced divorce without the establishment of a second union in the future lower their number of children by 0.65 = *exp*(–0.44) times. Besides this, the differences in fertility levels between married

women and repartnered or remarried respondents are not statistically significant. Thus, this means that by moving from the status "married" to "remarried" or "repartnered" does not significantly change a woman's fertility or the number of children she has.

The variable related to the woman's age at first marriage also shows the significant affects on a woman's fertility level. The experience of divorce without a second union in the future decreases the number of children by 0.61 = *exp*(–0.49) times in log odds. The impact of repartnering after divorce on the number of children is still insignificant. Additionally, the age at interview is positively associated with the woman's number of children and still increases the number of children with the increase of a woman's age. It is important that their age at first marriage has significant results, especially for early marriages. Early marriage is increasing the level of fertility by 1.62 = *exp*(0.39) times compared to marriages, experienced at middle age. At the same time, late marriages in comparison with marriages experienced at middle age are not influential on the number of children ever born by a woman.

The last model included in addition to the one mentioned above, the socio-economic variables and variable related to the reproductive years spent in a first marriage (or the duration of first marriage). A woman's age is still a relevant factor, positively associated with the woman's number of children. This variable shows the same result: that the number of children is increasing with the age of a woman. In the third model when the other factors were included, the influence of a woman's marital status on the fertility level became more diverse. The experience of divorce without further repartnering lowers the number of children by 0.87 = *exp*(–0.14) units. While the dissolution of first marriage with further remarriage or repartnering increases the number of children by 3.43 = *exp*(1.23) times. Additionally, from the ordinal logistic regression models, other variables which were influential on a woman's level of fertility were received. Statistically significant differences in the number of children appeared between rural and urban inhabitants of the East-Kazakhstan region. For example, if woman moved from a rural area to urban, she would decrease her number of children by 0.60 = *exp*(–0.50) times from the highest number: two or more to one child. The nationality of women is also an influential factor in measuring the fertility levels in the East-Kazakhstan. Notably, the number of children born by Kazakh women is 2.03 = *exp*(0.71) times higher compared to their Russian counterparts. The number of children born in the parental family is one of the most important factors in the planning of the future number of children. Besides this, a lower number or absence of siblings might lead to the delivery of fewer children in the future. For example, women having only one sibling reduces their number of children by 0.52 = *exp*(–0.66) times in comparison with women having two or more siblings. The reproductive years spent in the first union allow the measurement of depressing affect of family dissolution on a woman's number of children. The dissolution of marriage after 0–5 years reduces the number of children by 0.23 = *exp*(–1.47) times compared to women who stayed in marriage for more than 10 years.

Table 49 shows the results of calculation the predicted probabilities of having three children by a woman, where the number of children (depended variable) was examined according to a woman's marital status and other relevant factors, such as: the nationality and woman's age. The lowest probability of having three children is obtained for divorced women without a partner and for continuously married Russian women. Controversially, the highest probability of having more children is observed for divorced

women who experienced the second union at their reproductive age and for continuously married Kazakhs.

Tab. 49 – Predicted probabilities of having three children from ordinal logistic regression

Nationality	Marital status	Age	Predicted probabilities
Russian	Divorced under the age of 40, no second union	Under 34	0.005
Russian	Continuously married	Under 34	0.009
Kazakh	Divorced under the age of 40, no second union	Under 34	0.013
Kazakh	Divorced under the age of 40, no second union	Under 34	0.013
Russian	Divorced under the age of 40, the second union	Under 34	0.018
Kazakh	Continuously married	Under 34	0.022
Kazakh	Continuously married	40–49	0.129
Russian	Divorced under the age 40, the second union	40–49	0.773
Kazakh	Continuously married	40–49	0.818
Kazakh	Divorced under the age of 40, the second union	35–39	0.889

Source: SAS output

Conclusively, the dissolution of first marriage without further remarriage or repartnering when controlling only a woman's age at interview and age at first marriage has a negative impact on a woman's fertility, and lowers the number of children per woman. At the same time, women who experienced repartnering or remarriage after the dissolution of a union have the same level of fertility as their continuously married counterparts. This is true only when a woman's age at interview and age at first marriage were taken into account. However, after the addition of other variables to a model, such as: the place of residence, nationality, number of siblings, and the duration of first marriage, the situation concerning repartnered women have changed. The women who entered into a second union increased their fertility level in comparison with women who continuously stayed in the first marriage.

Therefore, this chapter attempted an analysis of the impact of marital instability on a woman's fertility in the East-Kazakhstan region. There were three hypotheses related to the analysis of relationships between the dissolution of marriage and fertility levels. The first hypothesis was related to the assumption that a new partnership (remarriage and cohabitation) is influential on childbearing after the dissolution of marriage. It was expected that repartnered women are more likely to experience a post-dissolution birth compared to divorced women who did not entered a second union. The next hypothesis includes the assumption that remarried women are more likely to have a post-dissolution child in

comparison with their repartnered counterparts living in cohabitation. It must be noted that according to the analysis of predictors which are influential on having a post-dissolution child, women who experienced the second union are more likely to deliver a child after divorce compared to divorced women without a partner. However, the differences between remarried and repartnered women are not that big. The propensity of having a post-dissolution child is the same for both remarried women and women living in cohabitation after the dissolution of their first marriage. Another hypothesis was related to the assumption that divorced women decrease their fertility level in comparison with continuously married women. However, during the analysis of the impact of divorce on a woman's number of children, divorced women were classified into two groups: those who experienced the second union and those who did not. As was expected, divorced women, who did not enter into a second union, reduced their fertility compared to women who stayed in their first marriage. At the same time, women who entered into a second union after the dissolution of union increased their number of children compared to continuously married women. Conclusively, divorce has a negative impact on a woman's number of children in the East-Kazakhstan region. Only the experience of a new partnership (cohabitation and remarriage) could lead to delivering the additional number of children during the reproductive years spent in a second union. In connection with this, the cohabitation and remarriage as a key factors in allowing the prediction to have a post-dissolution child and factors of the increasing number of children per woman should be examined in the next chapter.

Chapter 7

Analysis of cohabitation and remarriage after the dissolution of marriage

7.1 Methodological measures and analysis of predictors

Repartnering including remarriage and cohabitation after the dissolution of marriage is an important factor influencing the current family types and patterns in the East-Kazakhstan region. As was proved in the previous chapter the repartnering is a key factor in the analysis of a woman's fertility behavior after the dissolution of marriage, particularly divorce. Remarriage along with cohabitation after divorce are positively associated with experience of post-dissolution births. This chapter aims to analyze the factors which lead to the likelihood of building a new family after experiencing divorce and widowhood among women in the East-Kazakhstan region.

The process of repartnering (remarriage and cohabitation) is important from a demographic point of view. For instance, if the dissolution of marriage is considered as a process which ends the possibility to deliver the desired number of children by a woman and is negatively associated with fertility levels, then repartnering is seen as a positive solution to these problems. Besides the problem of repartnering and remarriage has hitherto remained a latent and under studied area in demographic literature. At the same time, theories of fist marriage cannot be applied in the analysis of second union formation. The experience of first marriage is carried with individuals into subsequent relationships and their views about the institution of marriage may be changed by the experience of divorce (R. Parker 1999, F. Rajulton and T. Burch 1992). Moreover, some demographers came to a conclusion that the process of remarriage could be considered as an indicator of an acceptance of new lifestyles when marriage becomes an unimportant institution. For example, when high rates of divorce accompanied with a high percentage of remarriage, it suggests that people are not rejecting marriage as an institution, but are simply dissatisfied with their first marriage (C. McNamee, R. Raley 2011). Controversially, the low rates of remarriage along with increasing number of cohabitation show a situation where marriage becomes an unimportant or outdated institution in society. Consequently, a woman's attitude towards marriage is one of the most important parameters in predicting a new marriage or a partnership. Previous researchers have found only two

important variables related to the likelihood of remarriage, such as: the age of woman and the presence and number of children. They concluded that these factors negatively affected a woman's likelihood of marriage after the dissolution of their first marriage (R. Parker 1999). Perhaps this is because men seek younger partners and women seek older partners. Concurrently, women who repartnered tend to be younger and with fewer children (without or with only one child) (G. Spanier, L. Thompson 1983, R. Parker 1999). For women who had divorced at older ages, the likelihood of being repartnered is lower. Along with this, the chance of re-forming a union decreases as the number of children increases. This might be related to the fact that having children from the previous marriage may decrease woman's attractiveness as a partner due to its association with various costs, both direct financial and indirect associated with complexities of stepfamilies (L. Bumpass, J. Sweet 1990). The presence of children has also been considered to lessen the need to repartner, as children may provide company and be a source of emotional support (J. Hughes 2000, A. Skew, A. Evans and E. Gray 2008). Another important explanation is that presence of children from previous marriage might reduce the chance for social interaction and as a consequence decrease the possibility of finding a new partner (A. Skew, A. Evans and E. Gray 2008).

A woman's relationship history or as it was highlighted by A. Skew, A. Evans and E. Gray (2008) the "relationship career" could be influential on repartnering prospects. So far the union duration has been the most commonly used measure of woman's relationship history. Some demographers concluded that the duration of previous marriage has not significant impact on the likelihood of being repartnered (F. Mott and S. Moore 1983). At the same time, the other demographers highlighted a positive effect of longer durations of previous marriages on repartnering (A. Poortman 2007, Z. Wu and C. Schimmele 2005). However, in the demographic literature there is no any hypothesis related to the differences in repartnering between divorced and widowed women. Only A. Poortman (2007) mentioned in his study that those who have ever married have lower odds of repartnering than those who have only cohabitated.

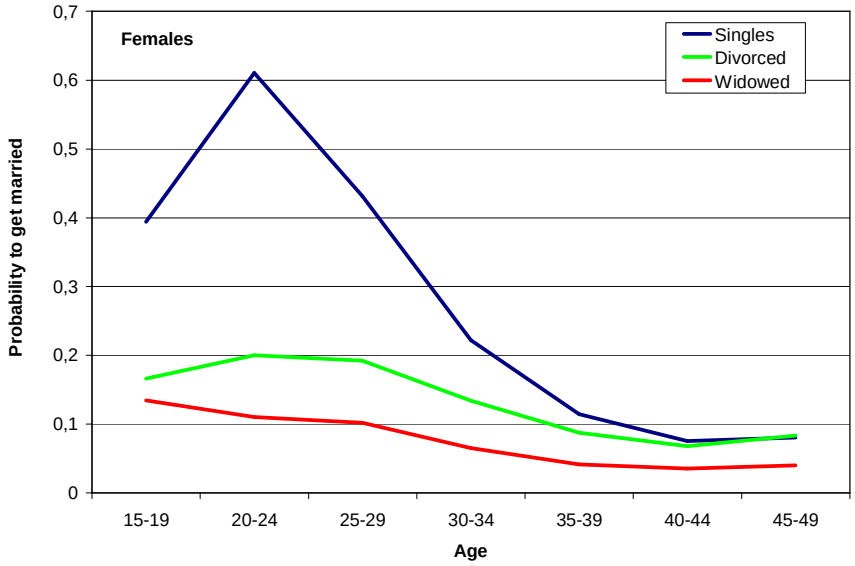
The level of education and employment status also has an impact on the probability of experiencing a new partnership. Some researchers (A. Skew, A. Evans and E. Gray 2008) concluded that highly educated and employed women are more likely to stay without a partner. Whereas conversely, unemployed women are more tend to build a new family or partnerships, and perhaps view repartnering as an alternative for employment. This is due to the fact that employment is more frequently associated with independence. Based on traditional view of relationships, when a man is breadwinner, and a woman is homemaker, it is argued that the more economically independent the woman is, the less need she has to partner (A. Skew, A. Evans and E. Gray 2008).

However, it should be noted that according to statistical analysis, remarriage among divorced and widowed women in the East-Kazakhstan region is not so high. This problem was discussed in the MA thesis "One-parent families in the East-Kazakhstan region". Conclusively, the analysis of transition probabilities from one marital status to another showed big differences between male and female post-dissolution marriage behavior. For example, Figure 70 represents a graphical view of the probabilities of getting married according to a female's marital status and age for the 1999–2003 five-year calendar interval. The numerator was received through calculating a simple average of events for each calendar

year. It included: singles (first-marriages), divorced and widowed (remarriages). The denominator for all those probabilities was taken from the census data (number of population for the beginning of calendar year according to marital status and age). Accordingly, the probability of getting married for males is not different according to marital status. After marriage dissolution divorced or widowed men remarried as frequently as single males. These gender differences in repartnering might be related to the fact that women received fewer benefits from being in a partnership compared to men (A. Poortman 2007, A. Skew, A. Evans and E. Gray 2008). Moreover, the gender differences may be caused by the fact that women take a longer time to recover from the negative mental health consequences of a family dissolution compared to men (M. Willits, M. Benzeval and S. Stansfeld 2004). However, this study will consider an analysis of the marital behavior of females after the dissolution of their first marriage.

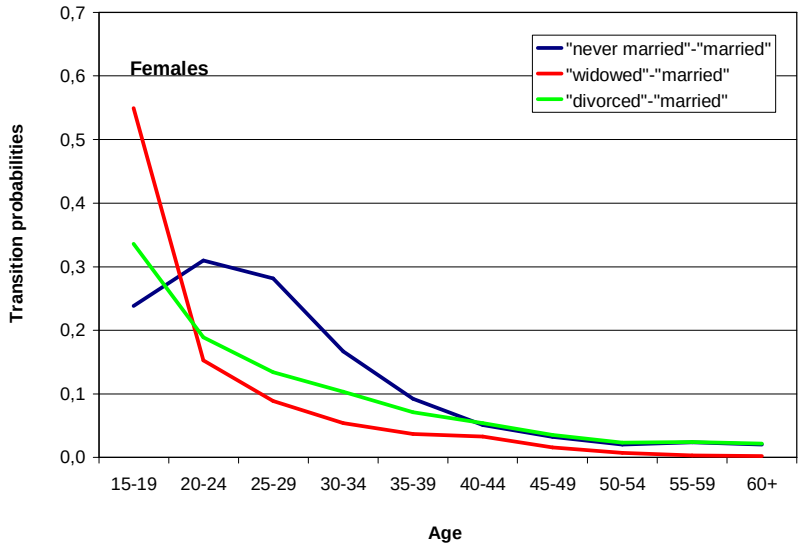
The probability of remarriage for females is lower than the probability of the first marriage. This situation is common for the East-Kazakhstan region. After family dissolution in the case of divorce, children mostly stay with their mother and the frustrated husband can marry again. The probability of getting married for a young widowed man with one or more children is also higher than for woman. This is could be due to cultural and psychological aspects of the different behavior of men and women, not only in society, but also in family relations. Such differences are the reasons of different behavior of men and women after the dissolution of their family.

Fig. 70 – Probability of getting married by age for females, East-Kazakhstan region, 1999-2003



Source: D. Ualkenova, 2010

Fig. 71 – Transition probabilities from multistate life table for females, East-Kazakhstan, 1999-2003



Source: D. Ualkenova, 2010

Figure 71 shows the distribution of transition probabilities by a female's age and marital status from the multistate life tables with 100,000 hypothetical population. The probability to move from the state "never married" to "married" is relatively higher at young ages. Moreover, the probability of transition from the states "widowed" and "divorced" to "married" is relatively low for all ages. Perhaps, this is due to the fact that females more likely to stay in the same marital status, such as: "widowed" or "divorced" during their life. The probability to be married for divorced females is higher than for widowed women. This is caused by the fact that usually, making a new relationship is easier for those females who had experienced divorce in their lifetime, compared to those who experienced the death of a partner. However, it is essential to note that for the 15–19 age group the probability of remarrying after widowhood is very high. This could be related to the assumption that young women are more likely to remarry compared to older generations. The main motivation for remarriage among the widowed is the presence of young children who need maternal care and financial support. Another important reason is the need to have a partner who will share the household responsibilities.

Conclusively, the probability of remarrying is lower compared to the probability of first marriage. Moreover, a widowed woman is less likely to remarry compared to divorced females. Unfortunately, the statistical data for the East-Kazakhstan region does not provide any information regarding cohabitation in general and after dissolution of first marriage in particular. In light of this information, before formulating the hypotheses for further analysis, the descriptive analysis of data, used for the modeling of predictors for the post-dissolution remarriage and cohabitation, should be included.

Table 50 shows the percentage distribution of women living in cohabitation according to age at interview and marital status before experiencing a new partnership. The percentage of divorced women who repartnered after the dissolution of first marriage is higher at the older ages. The majority of single

women at young ages prefer to live in cohabitation compared to older generations. The percentage of widowed women living in cohabitation is more gradually distributed among all age groups.

Tab. 50 – Women living in cohabitation by age and previous marital status

Age at interview	**Women, who experienced divorce**	**Women, who experienced widowhood**	**Women without first marriage (singles)**
Less than 29 (%)	9.1	33.3	59.5
30–39 (%)	45.5	30.2	24.3
40–49 (%)	45.5	36.5	16.2
Total (%)	**100.0**	100.0	100.0
N (in abs. numbers)	**17**	**48**	**143**

Note: percentage was calculated from the number of women in cohabitation

Source: SAS output

The percentage distribution of remarried women according to age and the marital status before second marriage is shown in Table 51. The percentage of divorced women who experienced second marriage at a young age is higher compared to widowed women at the same age. However, the majority of second marriages among divorced and widowed women happened at adult and older ages.

Tab. 51 – Remarried women by age and previous marital status

Age at interview	**Women, who experienced divorce**	**Women, who experienced widowhood**
Less than 29 (%)	25.8	8.3
30–39 (%)	32.3	30.2
40–49 (%)	41.9	61.5
Total (%)	**100.0**	**100.0**
N (in abs. numbers)	**292**	**54**

Note: percentage was calculated from the number of remarried women

Source: SAS output

Table 52 includes the percentage of divorced women who experienced marriage or cohabitation after the dissolution of marriage by age and number of children. The majority of women, who decided to remarry or build a new partnership, is among the women with one child. Moreover, the biggest share of remarried women is among young women (less than 25).

Tab. 52 – Repartnered women by age and number of children at first marriage

Age at end of first marriage	**Cohabitation**		**Remarriage**	
	One child from the first marriage	**Two and more children from the first marriage**	**One child from the first marriage**	**Two and more children from the first marriage**
Less than 25 (%)	41.2	11.8	57.5	38.4
More than 25 (%)	47.1	0.0	2.7	1.4
Total (%)		**100.0**		**100.0**
N (in abs. numbers)		**17**		**292**

Note: percentage was calculated from the number of women who experienced divorce

Source: SAS output

According to the previous analysis of data, the clear relationships between a woman's age, number of children, previous marital status and the probability of remarrying or to live in cohabitation is obvious. However, this analysis did not allow the prediction of women's marital behavior after the dissolution of their first marriage. In this case, further analysis with the application of exact logistic regression modeling seems to be more preferable. Therefore, the exact logistic regression models in the analysis of post-dissolution marital behavior of women will be used. In this study the impact of characteristics such as: a woman's age, number of children, education, employment status etc. on the prediction of post-dissolution cohabitation and remarriage will be analyzed.

Conclusively, during the first steps of the analysis, the following hypotheses were formulated. The first hypothesis related to the assumption that young women are more likely to remarry in comparison to older women, who prefer to live in cohabitation. The next hypothesis related to the number of children at the moment of dissolution of the first marriage. It comprises the assumption that women with one child from the first marriage are more likely to live in a step-family, compared to women who have two and more children at the moment of dissolution of marriage. And finally, divorced women are more likely to build a new family after the dissolution of their first marriage compared to their widowed counterparts, who prefer to stay at the same marital status.

7.2 Analysis of cohabitation after the dissolution of marriage

The analysis of cohabitation after the dissolution of first marriage focuses on divorced and widowed women at a fertile age. Along with the variables, describing demographic characteristics (age at interview, nationality, number of children, experience of divorce, and experience of widowhood) the socio-economic characteristics (educational level and employment status) and variable, which includes attitudes towards marriage were added to the models. The variable related to a woman's age at interview was divided into three categories: less than 29, 30–39, and 40–49. The variable, describing the nationality of women aimed to highlight the differences in marital behavior among Kazakh and Russian women. The category, relating to other nationalities was included in order to test two previous categories (Kazakh and Russian). Additionally, the variable describing the number of children born in the first marriage has two

categories: women having one child, and women having two and more children. The experience of divorce and widowhood (including yes/no categories) also were added to the model in order to highlight the differences in post-dissolution marital behavior according to a woman's marital status. In order to evaluate the role of the socio-economic characteristics with the intention of forming a new partnership the variables related to employment status at interview (employed and unemployed) and educational level (basic, vocational and higher) were included. At the same time, attitudes towards marriage are very important predictors of building a consensual union after the dissolution of a first marriage. This variable has two categories: positive and negative attitudes.

Table 53 shows the parameter estimates from exact logistic regression models analyzing the cohabitation after the dissolution of first marriage. The first model included the age at interview and attitudes towards marriage. Women with positive attitudes towards marriage are less likely to experience repartnering after the dissolution of their first marriage. The odds ratio of women with positive attitudes towards marriage being repartnered after the dissolution of marriage is 0.09 (Table 54). At the same time, a woman's age at interview did not show any significant relationships with the risk of living in cohabitation after the dissolution of her first marriage.

Tab. 53 – Exact parameter estimates from logistic regression models predicting cohabitation after the dissolution of first marriage

Predictors	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Age at interview (reference: 30–39)				
Less than 29	0.42	0.48		
40–49	0.25	0.25		
Nationality (reference: Kazakh)				
Russian		0.75*		0.77*
Other		0.82		1.09
Number of children at the end of first marriage (reference: one)				
Two and more		-1.69*	-1.55*	
Experience of divorce (reference: No)				
Yes			1.03*	0.99*
Experience of widowhood (reference: No)				
Yes			-2.10	
Employment (reference: Employed)				
Unemployed				0.38
Education (reference: Basic)				
Higher				0.15
Vocational				0.21
Attitudes towards marriage (reference: Negative)				
Positive	-2.39**	-2.37**	-2.35**	-2.33**

Note: * p<0.05; ** p<0.01

Source: SAS output

The second model aimed to test variables related to women's nationality and number of children at the end of first marriage. Accordingly, the likelihood of building a new partnership after the dissolution of marriage is higher for Russian women compared to their Kazakh counterparts. The odds ratio of a Russian female being repartnered were 2.12 times greater than for Kazakh woman. It is important that the likelihood of formerly married women repartnering decreases as the number of children born in the first marriage increases. For example, women having two or more children reduced their opportunity to be repartnered (odds ratio is 0.18) compared to women having only one child at the end of their first marriage. This could be explained by the assumption that woman having more children are more likely to remarry instead of living in cohabitation after the dissolution of their first marriage. However, this variable was tested in the third model and also showed a significant result: that formerly married women with two or more children are less likely to build a new partnership.

Tab. 54 – Odds ratios from exact logistic regression models analyzing the cohabitation after dissolution of marriage

Predictors	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Age at interview (reference: 30–39)				
Less than 29	1.55	1.62		
40–49	1.28	1.28		
Nationality (reference: Kazakh)				
Russian		2.12*		2.16*
Other		2.28		2.97
Number of children at the end of first marriage (reference: one)				
Two and more		0.18*	0.21*	
Experience of divorce (reference: No)				
Yes			2.79*	2.70*
Experience of widowhood (reference: No)				
Yes			0.12	
Employment (reference: Employed)				
Unemployed				1.46
Education (reference: Basic)				
Higher				1.16
Vocational				1.23
Attitudes towards marriage (reference: Negative)				
Positive	0.09**	0.09**	0.10**	0.10**

Note: * p<0.05; ** p<0.01

Source: SAS output

The third model included variables which describe a woman's marital status before forming a new partnership. In connection with this it must be highlighted that women who experienced divorce during their lifetime more likely to form a new partnership compared to those who did not (the odds ratio is 2.79). At the same time, even if the variable related to the experience of widowhood did not show

significant results, it could be argued that widowhood is negatively associated with the likelihood of being repartnered.

The last model included variables which describe the socio-economic characteristics of women, such as: their educational level and employment status. However, the likelihood of living in cohabitation after the dissolution of first marriage was not affected by these variables. At the same time, the post-dissolution marital behavior of Russian women is significantly different from Kazakh women. Russian women are more likely to build a new partnership compared to their Kazakh counterparts. In addition, women who experienced divorce are 2.7 times more likely to live with a partner in cohabitation. This could be explained by the negative experience obtained from the first marriage and a weak interest in a second union, but high interest in the source of intimacy and emotional support (R. Lampard, K. Peggs 1999).

Conclusively, the likelihood of living in cohabitation after the dissolution of marriage is not dependent on the woman's age, or the experience of widowhood and socio-economic characteristics, such as employment status and educational level. At the same time, the formerly married woman's likelihood of forming a new partnership increases with decrease of the number of children born in the first marriage. Additionally, women with negative attitudes towards marriage were strongly motivated to live in cohabitation after the dissolution of first marriage. This subchapter also showed that the likelihood of building a new partnership varies among formerly married women according to their nationality. In this way, Russian women are more likely to live with their partners in a consensual union compared to Kazakh women. However, for a complete analysis of the process of repartnering as a key factor in a post-dissolution fertility behavior, remarriage as a one of the types of repartnering processes should be also examined.

7.3 Analysis of remarriage after the dissolution of first marriage

This subchapter related to the analysis of predictors influential on the remarriage after the dissolution of a first marriage. The data used in this analysis focused on divorced and widowed women at a fertile age. The women who experienced family dissolution were classified according to their age at interview (less than 29, 30–39, and 40–49), age at marriage (early, at middle age and late age), nationality (Kazakh, Russian, Other), number of children (one, and two and more). Unfortunately, the year of death of a husband is not available from the data, compared to the year of divorce. Therefore, only the variable related to age at divorce (less than 25, and more than 25) was included to a model. Additionally, the variables, describing the experience of divorce (yes, and no) and widowhood (yes, and no) were also added to the model. Moreover, the socio-economic characteristics such as: woman's employment status and level of education and variable which is related to the attitudes towards marriage at the interview (positive and negative) were also included.

Table 55 shows the exact parameters from logistic regression models designed to analyze the predictors of remarriage after the dissolution of first marriage. The first model included the variables related to a woman's age at interview, number of children, born in the first marriage and attitudes towards marriage. Accordingly, women with positive attitudes towards marriage are more motivated to remarry

compared to women with negative attitudes. This variable was tested in the further models and showed the same results. At the same time, the variable related to the age at interview did not show any significant results. However, it is clear that the likelihood of remarrying is increasing with the age of women. Moreover, the number of children also did not influence the intention of remarrying (the results are insignificant in the first and the second models). At the same time, it is obvious that women having two and more children are negatively associated with the likelihood of being remarried compared to the women with one child.

Tab. 55 – Exact parameters from logistic regression models predicting remarriage after the dissolution of marriage

Predictors	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Age at interview (reference: 30-39)						
Less than 29	-0.42					
40–49	0.25					
Age at divorce (reference: more than 25)						
Less than 25		1.42*	1.24*	1.37*		
Age at marriage (reference: early)						
Middle		1.47**		1.35**		
Late		1.23*		1.19		
Nationality (reference: Kazakh)						
Russian			-0.74*	-0.61		
Other			-1.02	-1.55		
Number of children at the end of first marriage (reference: One)						
Two and more	-0.88	-0.72				
Experience of divorce (reference: No)						
Yes					1.35*	1.35*
Experience of widowhood (reference: No)						
Yes					-2.28**	-2.28**
Employment (reference: Employed)						
Unemployed						-0.38
Education (reference: Basic)						
Higher						-0.15
Vocational						-0.21
Attitudes towards marriage (reference: Negative)						
Positive	2.39**	2.34**	2.30**	2.32**	2.35**	2.36**

Note: * p<0.05; ** p<0.01

Source: SAS output

The second model aimed to test variables related to age at divorce and age at marriage. The woman's likelihood of being remarried is increasing with a decrease of the age at divorce. For example for women who experienced divorce aged less than 25 the odds ratio of being in the second marriage is 4.14 times

greater in comparison with women who divorced at age more than 25 (Table 56). Perhaps this is due to the fact that young divorced women can easily find a new partner for a new marriage compared to older women. Moreover, younger women could be more motivated to deliver a post-dissolution child than older women. A desire to deliver a post-dissolution child could lead to the building a step-family. Surprisingly, women who experienced their first marriage at middle and late age are more likely to remarry after the dissolution of their first marriage compared to women who experienced early marriages. Perhaps, women who experienced early marriages are more likely to divorce aged more than 25. Whereas, women who experienced their first marriages at middle and late ages are more likely to divorce after the short time in marriage.

Tab. 56 – Odds ratios from exact logistic regression models analyzing remarriage after dissolution of first marriage

Predictors	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Age at interview (reference: 30–39)						
Less than 29	0.65					
40–49	1.28					
Age at divorce (reference: more than 25)						
Less than 25		4.14*	3.45*	3.95*		
Age at marriage (reference: early)						
Middle		4.33**		3.84**		
Late		3.44*		3.28		
Nationality (reference: Kazakh)						
Russian			0.47*	0.54		
Other			0.36	0.21		
Number of children at the end of first marriage (reference: One)						
Two and more	0.41	0.49				
Experience of divorce (reference: No)						
Yes					3.86*	3.86*
Experience of widowhood (reference: No)						
Yes					0.10**	0.10**
Employment (reference: Employed)						
Unemployed						0.69
Education (reference: Basic)						
Higher						0.86
Vocational						0.81
Attitudes towards marriage (reference: Negative)						
Positive	10.89**	10.34**	9.98**	10.18**	10.46**	10.46**

Note: * p<0.05; ** p<0.01

Source: SAS output

The third model included variables related to the age at divorce, a woman's nationality and attitudes towards marriage. Essentially, Kazakh women are more likely to remarry after the dissolution of marriage compared to their Russian counterparts (the odds ratio is 0.47 for Russian women). Perhaps this is due to the fact that Russian women are more likely to live in cohabitation compared to their Kazakh counterparts, aforementioned in the previous subchapter. However, this variable was tested in the fourth model, and unfortunately, when the age at marriage also was added it gave statistically insignificant results. At the same time, it is clear that the Russian women are less likely to remarry in comparison with Kazakh women.

The fifth model also included variables related to the experience of divorce and death of partners. In essence, the likelihood of being remarried is higher for divorced women (odds ratio is 3.86 times greater), while widowed women are more likely to stay at the same marital status (odds ratio is 0.10). This could be explained by the mental or physiological point of view of the women. Perhaps divorced women decide to remarry easier because they were involved in the process of taking the decision to dissolve their marriage. While widowed women were not prepared for the dissolution of their marriage and the death of their spouses happened suddenly.

The last model aimed to test a woman's socio-economic background (education, employment). However, according to the results, the East-Kazakhstani women's employment status and educational level are not influential in the likelihood of remarrying.

Conclusively, the likelihood of being remarried after the experience of the dissolution of first marriage is clearly influenced by the age at divorce, age at marriage, the woman's nationality and attitudes towards marriage, and also closely related to the experience of divorce and widowhood. The woman's likelihood of remarrying increased with the decrease of age at divorce, at the same time as the increase of the age at marriage. Moreover, Kazakh women are more motivated to form a second marriage compared to Russian women who prefer to live in cohabitation after the dissolution of their first marriage. Additionally, divorced women remarry more easily, compared to widowed women who avoid second marriage. Accordingly, women with positive attitudes towards marriage are strongly motivated to remarry compared to those who have negative attitudes. However, it should be mentioned that the woman's age at interview, the number of children at the end of first marriage and socio-economic characteristics are not influential on the woman's intention of remarrying after the dissolution of their first marriage.

This chapter aimed to analyze the predictors of post-dissolution repartnering among divorced and widowed women. It was anticipated that young women would be more likely to live in cohabitation compared to women at older ages who prefer remarriage. However, both analyses of cohabitation and remarriage after the dissolution of first marriage showed that the age of the woman does not have any influence on the likelihood of being repartnered. Unfortunately, the data and the small sample size did not allow this hypothesis to be tested in detail. However, it could be concluded that women at all ages have the same intention of being repartnered. The next hypothesis was related to the assumption that a fewer number of children increases the likelihood of being repartnered (remarriage and cohabitation). According to the analysis, women with two or more children at the end of their first marriage decreased the likelihood of living in a new partnership (cohabitation), while in the case of remarriage, this variable

was not influential. Additionally, it was expected, that the post-dissolution marital behavior of widowed and divorced women would be different. Therefore, divorced women would be more likely experience repartnering (cohabitation and remarriage), while widowed women would be more likely to stay alone. According to the results from exact logistic regression models, as it was aforementioned divorced women have a higher likelihood of living in a step-family, while widowed women less likely to experience a new partnership. This could be explained by different psychological reasons of the dissolution of family. For example, death of a partner is more of a depressing and unexpected event compared to the divorce, which could be happen by mutual agreement between spouses.

Conclusion

Conclusively, this thesis was aimed to analyze modern family types and their contribution to population development in the East-Kazakhstan region through an analysis of their structure, size, conditions and factors of origin. Additionally, three specific issues were examined: family dissolution process, the impact of this process on a woman's fertility level and a woman's post-dissolution marital behavior.

According to the descriptive analysis, the majority of women have already turned to the emancipated style of life and this could have happened due to specific life circumstances (divorce, separation, widowhood, birth out of wedlock etc.). In contrast, a big proportion of married women are still acting more "traditionally". However, the value of a family as union, which consists of a wife, husband and children, is still relevant among the majority of respondents in spite of their marital status. At the same time, women's attitudes towards the distribution of duties in a household and in the child care process allow to come to the conclusion, that according to their opinion, females are located in the same position as males in society. Additionally, marriage as a legal union is still relevant not only for married, widowed women, but also for never married, divorced mothers and women that living in cohabitation. Moreover, a desire to live in marriage, even if it is remarriage is very high among East-Kazakhstan women, especially for divorced women. Almost a half of widowed women prefer to stay alone and live without a partner. However, attitudes towards premarital sexual relationships are mostly positive, which is seen in a relatively high number of ever married respondents that have been pregnant before marriage. The nationality of partners is still important for the majority of Kazakh women, while a high proportion of Russians do not pay attention to this factor. However, married women are less intent on getting married to Kazakh partners in comparison with women, who prefer cohabitation. The conditions of family origin, such as: premarital sexual relationships, pregnancy before marriage, and hetero-national unions could be a crucial factor in the family dissolution process, mainly in divorce. Moreover, the gap between planned and actual numbers of children is higher among divorced women who did not end their fertile age at the moment of divorce. Women who have one child are more willing to have another one in comparison with those who have two or three children. The main obstacles in having the desired number of children for divorced and never married mothers are the absence of a partner as well as health problems, material

needs, and enough number of children already. The absence of a father negatively affects on a child only in the opinion of married, widowed mothers and women living in cohabitation. While the majority of divorced and never married mothers did not see any affect. Remarriage as a solution to the problem is accepted by the divorced and widowed, while never married mothers more concentrated on social benefits and kindergartens.

The role of the family dissolution in the development of single-parenthood is crucial. Essentially, the largest contribution to the appearance of lone-parent families headed by women at reproductive age belongs to divorce (D. Ualkenova 2010). This thesis was aimed to discuss factors which could lead to the intention to get divorced among women at reproductive age in the East-Kazakhstan region. During the studying this issue, the following hypotheses were formulated: the first hypothesis is that a woman's pregnancy before her first marriage increases the risk of divorce. The second hypothesis related to the assumption that a woman having a fewer number of children is more likely to dissolve her first marriage compared to a woman having more children. As expected, women who experienced pregnancy before the marriage are more likely to dissolve their first marriage compared to women who did not. Concurrently, women having one child aged less than 6 years also more likely to divorce in comparison with women having two and more children. Additionally, the risk of becoming divorced is relatively higher for those who experienced early marriage, unemployed, accepted divorce and have positive attitudes towards modern family (consisting of mother and child), and have a different nationality in comparison with their husband. Conclusively, women with modern attitudes towards family, marriage and those that accept new life styles are much more willing to become lone-parents.

At the same time, this study attempted an analysis of the impact of marital instability on a woman's fertility in the East-Kazakhstan region. There were three hypotheses related to the analysis of relationships between the dissolution of marriage and fertility levels. The first hypothesis was related to the assumption that a new partnership (remarriage and cohabitation) is influential on childbearing after the dissolution of marriage. It was expected that repartnered women are more likely to experience a post-dissolution births compared to divorced women who did not entered a second union. The next hypothesis includes the assumption that remarried women are more likely to have a post-dissolution child in comparison with their repartnered counterparts living in cohabitation. It should be noted that according to the analysis of predictors which are influential on having a post-dissolution child, women who experienced the second union are more likely to deliver a child after divorce compared to divorced women without a partner. However, the differences between remarried and repartnered women are insignificant. The likelihood of having a post-dissolution child is the same for both remarried women and women living in cohabitation after the dissolution of their first marriage. Another hypothesis was related to the assumption that divorced women decrease their fertility level in comparison with continuously married women. However, during the analysis of the impact of divorce on a woman's number of children, divorced women were classified into two groups: those who experienced the second union and those who did not. As was expected, divorced women, who did not enter into a second union, reduced their fertility compared to women who stayed in their first marriage. At the same time, women who entered into a second union after the dissolution of union increased their number of children compared to continuously

married women. Conclusively, divorce has a negative impact on a woman's number of children in the East-Kazakhstan region. Only the experience of a new partnership (cohabitation and remarriage) could lead to delivering the additional number of children during the reproductive years spent in a second union.

In connection with this, the cohabitation and remarriage as a key factors in allowing the prediction to have a post-dissolution child and factors of the increasing number of children per woman also were examined. Initially, this study was aimed to analyze the predictors of post-dissolution repartnering among divorced and widowed women. It was anticipated that young women would be more likely to live in cohabitation compared to women at older ages who prefer remarriage. However, both analyses of cohabitation and remarriage after the dissolution of first marriage showed that the age of the woman does not have any influence on the likelihood of being repartnered. Unfortunately, the data and the small sample size did not allow this hypothesis to be tested in detail. However, it could be concluded that women at all ages have the same intention of being repartnered. The next hypothesis was related to the assumption that a fewer number of children increases the likelihood of being repartnered (remarriage and cohabitation). According to the analysis, women with two or more children at the end of their first marriage decreased the likelihood of living in a new partnership (cohabitation), while in the case of remarriage, this variable was not influential. Additionally, it was expected, that the post-dissolution marital behavior of widowed and divorced women would be different. Therefore, divorced women would be more likely experience repartnering (cohabitation and remarriage), while widowed women would be more likely to stay alone. According to the results from exact logistic regression models, as it was aforementioned divorced women have a higher likelihood of living in a step-family, while widowed women less likely to experience a new partnership. This could be explained by different psychological reasons of the dissolution of family. For example, death of a partner is more of a depressing and unexpected event compared to the divorce, which could be happen by mutual agreement between spouses.

Accordingly, the family transformation becomes more wide-spread in the East-Kazakhstan region. The first stage of transformation was resulted by transition from the large extended families to the nuclear families. The second stage lead to the transition from nuclear families to the modern, such as: single-parent, step-families and families with cohabited partners. The emancipation of women, the simplification of family-conjugal legislation and global political and economic changes had a significant impact on family. Nowadays the new types of families appear due to be result of variability of life circumstances and the way of formation and dissolution of conjugal unions: divorce, death of one of the spouses, extra-marital births, cohabitation, and remarriage. Divorce has an important impact on the transformation of families in the East-Kazakhstan region. Moreover, it has a negative impact on the fertility level of region. Additionally, remarriage and repartnering could play a significant role in the recapturing of most of the lost children due to the dissolution of the first marriage. However, the probability of remarriage among women at fertile age in the East-Kazakhstan region remains low.

Due to small sample size and design of questionnaire the study has the limitations. Aforementioned, the data does not consider the year of death of women's spouses, which does not allow an analysis of widowhood according to the duration of marriage. Additionally, due to the lack of such data, the influence of duration since the experience of widowhood was not included in the modeling of remarriage

and repartnering among widowed women. Another important issue is the absence of data regarding the premarital cohabitation among divorced and first time married women. Conclusively, the “trial marriage” was not included in the analysis of divorce risks among divorced and continuously married women. Moreover, during the studying of new types of families the problem of measuring cohabitation appeared. Nowadays in Kazakhstan generally and in the East-Kazakhstan region particularly, cohabitation defined as unmarried partners living in one household. However, during analysis of cohabitation two types of cohabited partners were defined: the first type is cohabitation as it defined in the demographic literature, and the second type is so called “customary marriages”, when spouses are married according to religious roles (in mosque), but not legally. Moreover, in the Kazakhstan statistical office households with cohabited partners, single-parent households and households resulted by “customary marriage” must be distinguished in order to avoid misunderstanding and over- or underestimations.

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Annex 1

Questionnaire

Questionnaire N _____

Code _____

Code of region (urb/rur) _____

1. Personal information

1.1 Date of birth			
Yours		Mother's	
Father's		Husband's/Partner's	
1.2 Nationality			
Yours		Mother's	
Father's		Husband's/Partner's	
1.3 Education			
Basic		Vocational	
Higher		Post-university	
1.4 Marital status			
Single		First time married	
Married the second and more time		Separated, but legally married	
In cohabitation		Divorced	
Widowed		Other	
1.5 Households members			
Total number in a household		Number of children under the age of 18	
Number of pensioners, or working parents		Number of economically active persons	
Number of males		Number of females	
1.6 Employment			
Metallurgical, communication, industry and transportation		Agriculture	
Government employee		Medicine	
Education, science and culture		Business	
Police, army, court and prosecutors		Service	
NGO		Media	
Student		Unemployed	

Other			

2. How many children do you have?

Number of children	Date of birth	Gender
One child/ First child		
The second child		
The third child		
The fourth child		
Other children		

3. How many siblings do you have?

Number of siblings	Date of birth	Gender
One sibling/ First sibling		
The second sibling		
The third sibling		
The fourth sibling		
Other siblings		

4. The type of parental family

a. With both parents	e. With grandparents/ other relatives
b. With both parents, one of them step-parent	f. Foster family or orphanage
c. With mother only	g. The situation has changed several times
d. With father only	h. Other_____

5. The year when your parents got married _____

6. At what age did you leave your parental home _____

7. Could you provide information about your parents?

Does your mother alive?	a. Yes	b. No
Does your father alive?	a. Yes	b. No
Do you support your parents, and do your parents support you in:		
The type of help	**Parents assist you**	**You assist parents**
a. A moral help, discussion of problems		
b. Housekeeping duties		
c. Help in organization of big		

events		
d. Financial support		
e. Help in childcare duties		
f. Other		

8. Who usually helps you to solve problems?

a. Husband/Partner	d. Friends
b. Parents	e. Solving by myself
c. Siblings/ Relatives	f. Other_____

9. How are the duties in your family distributed?

a. Husband is working, and wife is at home	c. Both should work and share duties in home
b. Husband is working, wife is part time working	d. Wife is working, husband is at home

10. What is important for you?

a. A family	c. Both family and work	e. A work
b. Rather family than work	d. Rather work than family	

11. Who must deal with childcare duties in a family?

a. A husband	e. Childcare facilities (kindergartens, schools)
b. A wife	f. Both parents
c. Grandparents	g. All listed above
d. Elder child(ren)	h. Other_____

12. Is leisure time important to you?

a. Very important	c. Rather unimportant, than important
b. Rather important, than not	d. Unimportant

13. In your opinion, what level of education is suitable for males and females?

Level of education	For males	For females
a. Basic		
b. Vocational		
d. Higher		

14. Are you religious?

a. Yes	d. Rather no, than yes
b. Rather yes, than no	e. No

15. How often do you visit mosque, church or synagogue?

a. Every week	c. Only for big events and ceremonies (marriage, funeral)	e. Never have been
b. Every month	d. Once a year	

16. In your opinion what is a family?

Family is …

a. Husband and wife	d. All relatives
b. Husband, wife and child(ren)	e. Only my children and my parents
c. Husband, wife, child(ren) and spouses' parents	f. Family is me

17. Do you agree with the statement: "We are responsible for our parents even if they do not deserve it"?

a. Strongly agree	c. Disagree
b. Agree	d. Strongly disagree

18. What are you planning in the future?

a. Living without a partner	d. Living in marriage, including re-marriage
b. Cohabitation	e. Other_____
c. Living in marriage	

19. Do you agree that marriage is an outdated institution?

a. Strongly agree	c. Disagree
b. Agree	d. Strongly disagree

20. What do you think about premarital sexual relationships?

a. It's good to be experienced before the marriage	c. It could be accepted only if couple planning to get married, or in case of real love
b. It's normal nowadays	d. The sexual relationships must be started only after marriage

21. Is your partner's nationality important to you?

a. Yes, very important	c. Rather no, than yes
b. Rather important, than not	d. It is not important for me

22. Have you been married?

a. Yes, once	c. No, never
b. Yes, two or more times	

23. The age when you got married?

Your _____	Husband's_____

24. Were you pregnant when you got married?

a. Yes	b. No

25. In your opinion what is the ideal age to get married?

For males _____	For females_____

26. What do you think about divorce?

a. The optimal solution of problems	d. It's better to find other solution
b. It's normal if spouses agree	e. Divorce is not accepted in any case
c. It's an extreme solution, accepted in case of really big problems between spouses	f. Other_____

27. Have you experienced divorce?

a. Yes	b. No

This block of questions for those who experienced divorce, if not, please move to the question 31

28. What was the reason for your divorce?

a. Inability to have children	f. Psychological incompatibility
b. Conflict with husband's parents	g. Alcoholism
c. Infidelity	h. Physical violence
d. Unjustified jealousy	i. Material problems
e. Sexual incompatibility	j. Other_____

29. Who initiated the divorce?

a. Wife	c. Both
b. Husband	

30. The year of your divorce _____

31. How many children did you have:

a. Before marriage _____

b. In the first marriage _____

c. In the second marriage _____

d. In subsequent marriages _____

e. After dissolution of marriage _____

32. Have you planned to have child?

	In marriage (how many)	**Out of marriage (how many)**
a. Yes		
b. No		

33. In your opinion, the ideal number of children to have is _____

34. What could be an obstacle to have the ideal number of children?

a. Husband's work/study	e. Health conditions	i. Do not have a partner
b. Your work/study	f. Alcoholism	j. Do not have an obstacles
c. Housing problems	g. The age	k. Other_____
d. Financial problems	h. Already have enough children	

35. Do you use contraception?

a. Yes	b. No

36. If yes, what kind of contraception do you use most frequently?

a. Condoms	c. Biological method	e. Refuse to answer
b. Oral	d. IUD	f. Other_____

37. In your opinion, what is abortion?

a. It's an ordinary medical procedure	c. It's a very serious procedure, only accepted in case of serious health problems, with the risk of death
b. It's serious medical procedure, but it's better to have an abortion than having an undesirable child	d. Abortion is not accepted in any case

38. Have you experienced an abortion?

	Before / Out of marriage	In marriage	After dissolution of marriage
a. Yes (How many)			
b. No			
c. Refuse to answer			

39. What was your motivation to get pregnant?

a. Pregnancy from a loved one	e. Self affirmation through the pregnancy
b. Woman should have a child after marriage	f. Age
c. Pregnancy in order to keep relationships	g. Wanted to have a child
d. Did not want to make an abortion	h. Other_____

40. Are you planning to have one more child in the future?

a. Yes	b. No

41. If not planning, why not?

a. Housing problems	c. Health problems	e. It's incorrect without marriage
b. Financial problems	d. Already have enough children	f. Do not have a partner

42. In your opinion the absence of a father in a family affects the child (ren)?

a. No affect	b. Positive affect	c. Negative affect

43. What can you recommend in order to reduce the negative affect?

a. Preferences in kindergartens	e. Social benefits
b. Preferences in schools	f. Involvement of grandparents to a childcare process
c. Free psychologist for child	g. Re-marry
d. Free summer holidays	h. Nothing could replace a father

44. Could you evaluate your confidence in the future of your child(ren)

0	**2**	**4**	**6**	**8**	**10**
Cannot imagine the future of my children					100% of confidence

45. The level of income per person in your household

a. Less than 100$	b. 100$ - 200$	c. More than 200$